

JVC

SERVICE MANUAL

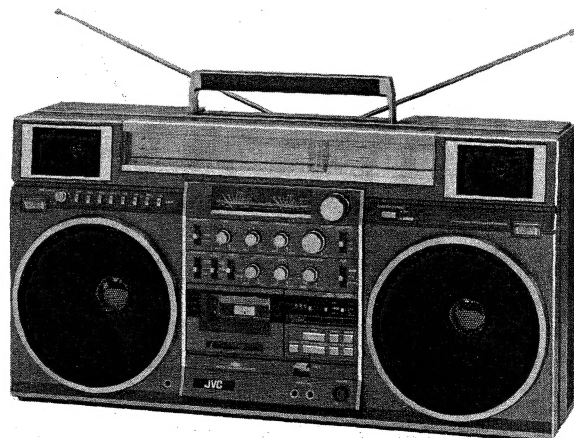
MODEL

RC-M90L/LB/LD

FM-MW-LW-SW1-SW2-SW3-SW4-SW5

8-BAND STEREO RADIO

CASSETTE RECORDER



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Specifications

Semiconductors : 21 ICs, 81 transistors & 1 FET
 Speakers : 20 cm x 2, 6.5 cm x 2

Tuner section

Frequency ranges : FM 88 – 108 MHz
 MW 540 – 1600 kHz
 LW 150 – 350 kHz
 SW1 1.6 – 3.5 MHz
 SW2 3.5 – 6.0 MHz
 SW3 5.95 – 6.2 MHz
 SW4 6.0 – 11.0 MHz
 SW5 11.0 – 26.0 MHz (RC-M90L/LB)
 11.0 – 25.0 MHz (RC-M90LD)

Antennas : Telescopic antennas for FM & SW
 Ferrite core antenna for MW & LW
 External antenna terminal (for FM & SW) provided

Tape recorder section

Track system : 4-track, 2-channel stereo
 Frequency response : 30 – 17,000 Hz (with metal tape)
 30 – 16,000 Hz (with chrome tape)
 30 – 15,000 Hz (with normal tape)

Wow & flutter : 0.05% (WRMS)
 S/N ratio : 54 dB (Metal)
 Rewind time : Within 95 sec. (C-60 cassette)
 Fast forward time : Within 95 sec. (C-60 cassette)

Amplifier section

Power output : Max. 40 W (20 W + 20 W)
 Input jacks : Mic x 2 (0.45 mV, 1.3 k Ω)
 Mix Mic x 2 (0.8 mV, 1.6 k Ω)
 Phono in x 2 (input level 3 mV min., impedance; 47 k Ω)
 Remote control jack x 1 (8-pin)
 DC in x 1
 Output jacks : Ext. speaker x 2 (load impedance; 6 ~ 16 Ω)
 Headphones (2 mW/8 Ω , load impedance; 8 ~ 32 Ω)
 Input/output jack : DIN jack
 Power supply : DC 15 V (10 "R20" cells) Car battery through a car battery adapter
 AC 240/220/110 V, 50/60 Hz
 Power consumption : 70 W (RC-M90L)
 61 W (RC-M90LB)
 Dimensions : 668(W) x 350(H) x 177(D) mm
 Weight : Approx. 10.0 kg (without batteries)
 Approx. 11.1 kg (with batteries)

Design and specifications subject to change without notice.
 No. 1466

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Features

- Newly developed 2-way, 4-speaker system with polyurethane laminated cone woofers.
 - 2-way, 4-speaker system with two 20 cm woofers and two 6.5 cm tweeters.
 - Use newly developed polyurethane laminated cone in the woofers to reproduce rich, realistic sound.
- High total power output of 40 W (20 W per channel).
- 2-motor full logic control mechanism.
 - Provided with a remote control jack.
 - Timer standby mechanism.
 - Cue and review facilities.
- Multi music scan mechanism for skipping up to 5 different program selections.

"Under license of Staar S.A., Brussel, Belgium"
- Built-in SUPER ANRS, ANRS/DOLBY* B noise reduction systems to greatly reduce tape hiss and improve dynamic range.
- Metal tape compatibility.
 - METAPERM recording/playback head and 2-gap SA (Sen-Alloy) erase head.
 - 3-position tape select switch for Metal, CrO₂ and Normal tapes.
- Multi mixing facilities when using wired microphone.
 - Provided with mixing volume control.
 - Provided with two microphone jacks (6.3 mm dia.) for exclusively microphone mixing.
- 8-band radio selection including FM, MW, LW, SW1–SW5.
- Manual/Automatic Recording Level control.
- Record muting facility for leaving non-recorded sections.
- Equipped with PHONO and DIN (REC/PB) jacks.
 - Built-in RIAA equalizer for direct connection of a turntable.
- External speaker jacks.
- External antenna terminals for FM and SW. (RC-M90L/LB)

* "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licencing Corporation.

Names of Parts

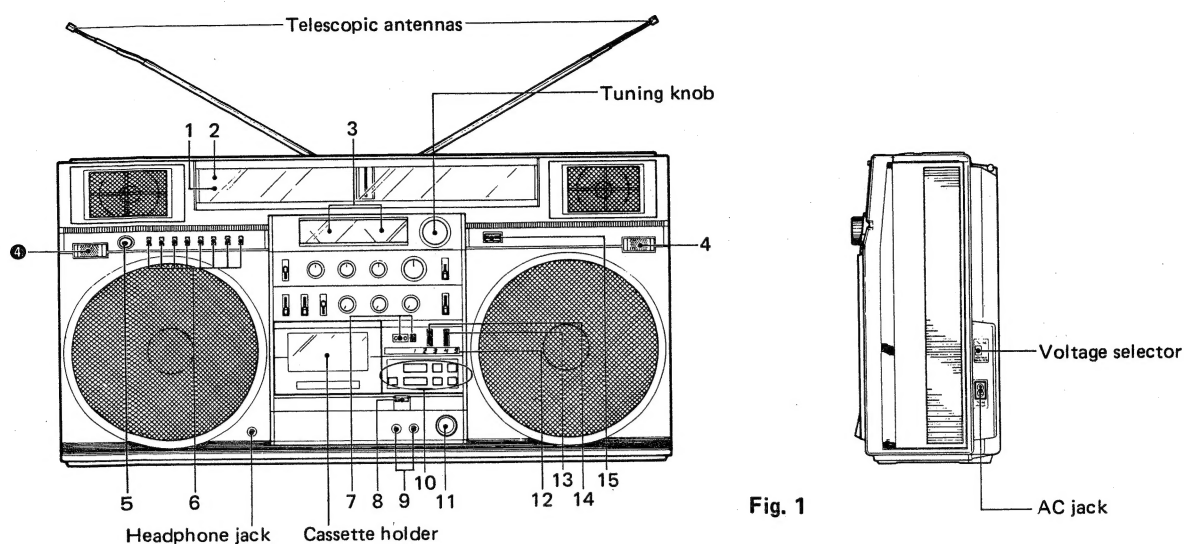


Fig. 1

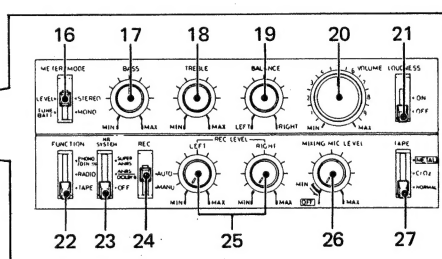
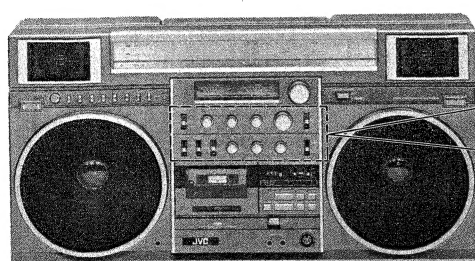
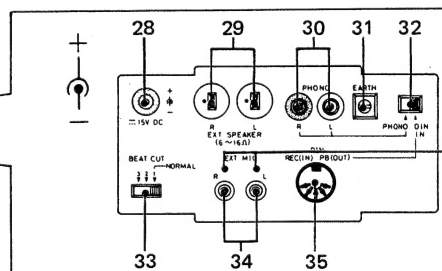
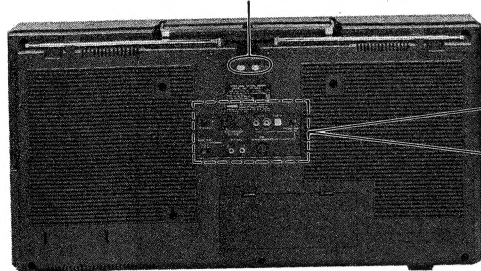


Fig. 2

Ext. antenna terminals (only for RC-M90L/LB)



Dummy holes for
connecting micro-
phones with remote
control plugs.

Fig. 3

- | | |
|------------------------------------|--------------------------------------------------|
| 1. POWER indicator | 16. METER/MODE switch |
| 2. FM STEREO indicator | 17. BASS control |
| 3. 3-way meter | 18. TREBLE control |
| 4. Built-in microphones (L, R) | 19. BALANCE control |
| 5. FINE TUNING knob | 20. VOLUME control |
| 6. BAND select buttons | 21. LOUDNESS switch |
| 7. Tape counter with reset button | 22. FUNCTION switch |
| 8. EJECT button | 23. NR SYSTEM switch |
| 9. MIXING MIC jacks | 24. REC switch (AUTO - MANU) |
| 10. Cassette operation buttons | 25. REC LEVEL controls |
| ■ STOP button | 26. MIXING MIC LEVEL control |
| ○ REC button | 27. TAPE switch |
| II PAUSE button | 28. External DC input jack (DC 15 V) |
| ◀◀ REVIEW button | 29. External speaker jacks (EXT SPKR ; 6 ~ 16 Ω) |
| ▶▶ PLAY button | 30. PHONO input jacks |
| ▶▶ CUE button | 31. EARTH terminal |
| 11. REMOTE jack | 32. PHONO/DIN IN selector switch |
| 12. MULTI MUSIC SCANNER indicators | 33. BEAT CUT switch |
| 13. MULTI MUSIC SCANNER switch | 34. External microphone jacks (EXT MIC) |
| 14. TIMER STANDBY switch | 35. DIN-type jack (REC/PB) |
| 15. FUNCTION STANDBY switch | |

Main Parts Location

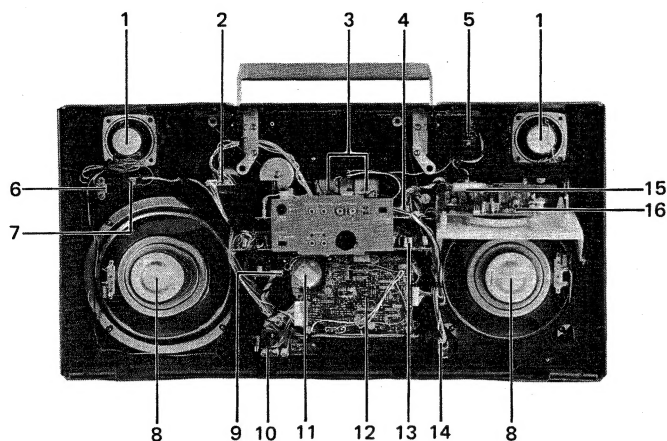


Fig. 4

1. Speakers (tweeter)
2. Power switch P.W. board ass'y
3. Indicators (meters)
4. Main amp. P.W. board ass'y
5. LED P.W. board ass'y
6. E.C. microphone
7. Connector board
8. Speakers (woofers)
9. M.M.S. P.W. board ass'y
10. Jack P.W. board
11. Capstan motor
12. Mecha. control P.W. board ass'y
13. Pre-amp. P.W. board ass'y
14. Phones (headphone) P.W. board
15. Tuner P.W. board ass'y
16. Bar antenna ass'y

Removal of the Main Parts

A. Rear cabinet and rod antennas (Fig. 5)

1. Remove the battery cover.
2. Remove 3 screws ① — SBSF4018R.
3. Remove 7 special screws ② — VKZ4008-002.
To remove the rear cabinet, remove the rod antennas and power supply P.W. board wires connector.
4. To remove the rod antenna only, remove a screw ③ fixing the antenna holder (need not the rear cabinet).

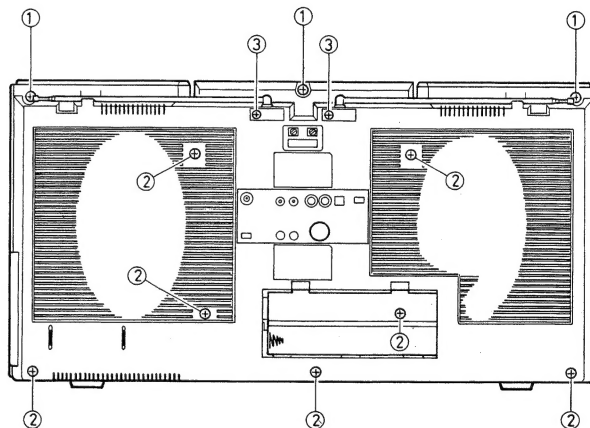


Fig. 5

B. Chassis (with cassette mechanical unit) (Fig. 6, 7)

1. Remove 2 screws ④ — SDSP3008RS (upper side on the front cabinet) and 2 screws ⑤ — SBSF3012R (lower side on the front cabinet).
2. Remove 7 screws ⑥ — SBSF3014C, and a screw — SBSF3030V.
3. Remove 8 connectors ⑦ ~ ⑨.
4. Remove lever switch knobs, VR knobs and tuning knob.

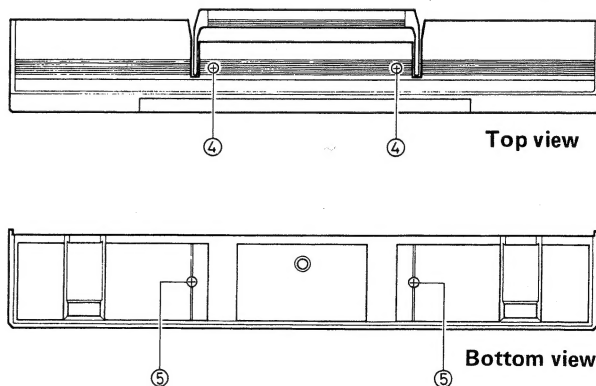


Fig. 6

C. Mechanical unit (Fig. 8)

1. Remove 4 screws (7) – SBSF3010V.
2. Remove a wire connector (1).
3. Unsolder head wires.

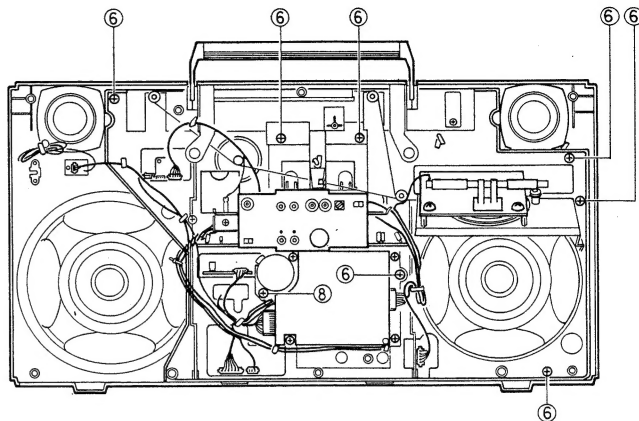


Fig. 7

D. Mechanical unit (How to remove directly from the front cabinet) (Fig. 7, 8)

1. Remove 4 screws (7) – SBSF3010V.
2. Remove a screw (8) – SBSF3030V.
3. Remove wire connectors (B), (D) ~ (F) and (I).
4. Unsolder head wires.

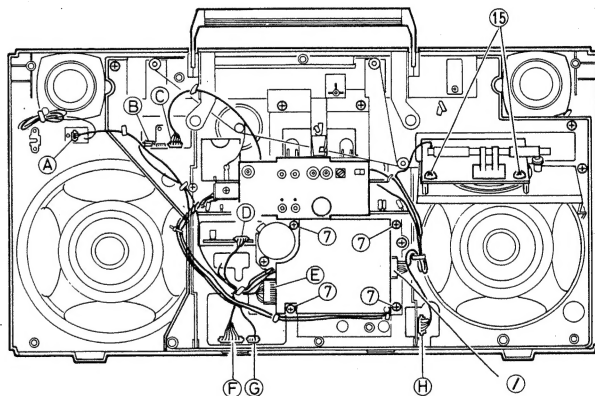


Fig. 8

E. Other parts (Fig. 8, 9)

1. Tweeters = remove 4 screws (9) – SBSF3008Z.
2. Woofers = remove 8 screws (10) – SBSF4010Z.
3. Connector P.W. boards and power switch P.W. board = remove 7 screws (11) – SBSF3010Z.
4. MMS jack and phones P.W. boards = remove 4 screws (12) – SBSF3008Z.
5. Mechanical operation button P.W. board = remove 2 screws (13) – SBSF2616Z.
6. Pre-amp. and main amp. P.W. board = remove 2 screws (14) – SBSF3012V.
7. Tuner P.W. board = remove 2 screws (15) – SBSF-3012V.

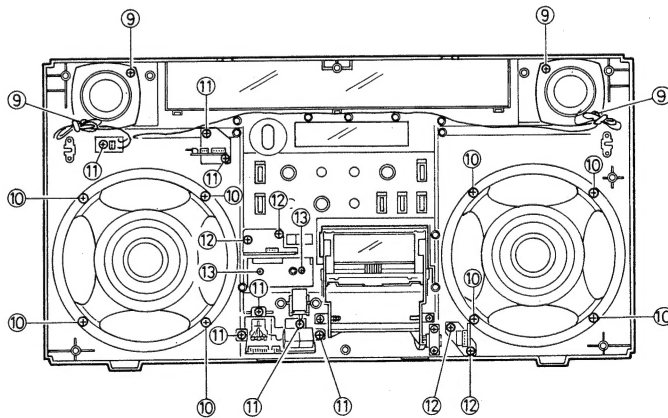


Fig. 9

Removal of the Mechanical Parts

(Refer to page 26 "Cassette Mechanical Component Parts".)

A. Pinch roller arm ass'y (96) (Fig. 10)

1. Remove E-ring (98).
2. Remove the pinch roller arm ass'y with its spring.

B. Heads (Fig. 10)

1. REC/PB head (45)
Unsolder the head wires and remove 2 screws (49).
2. Erase head (47)
Unsolder the head wires and remove 2 screws (51).

C. Cassette plate (Fig. 10)

1. Remove 2 screws — SDSB2605R.
2. To remove the cassette plate, hold upper side on the (A) and (B) points.

D. Tape counter (60) (Fig. 10)

1. Remove the counter belt (124).
2. Draw the counter ass'y to front side, pushing the mold part of the bracket lower side by screw driver.

E. Reel disk ass'y (Fig. 10)

1. Take-up reel disk ass'y (4)
Remove the cassette plate and the counter belt (124).
Remove the reel stopper (7).
2. Supply reel disk ass'y (5)
Remove the reel stopper (7).
When assembling the reel disk, the stopper need a new part, the stopper cannot be used again.

F. Mecha. control P.W. board ass'y (Fig. 11)

Remove 4 screws (142).

G. Flywheel holder (125) (Fig. 12)

Remove 3 screws (127).

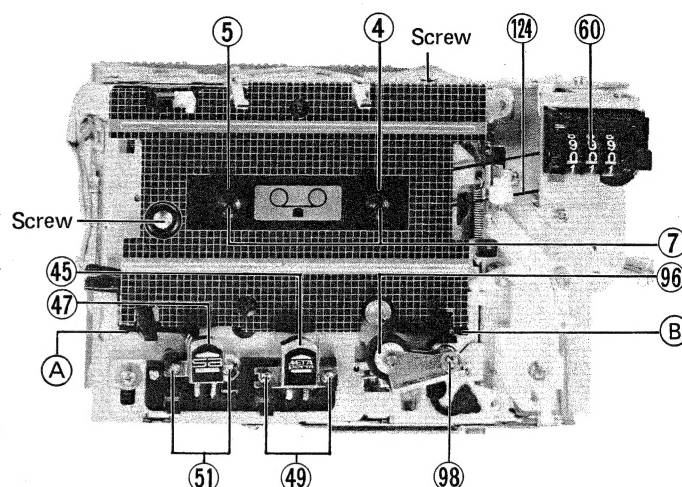


Fig. 10

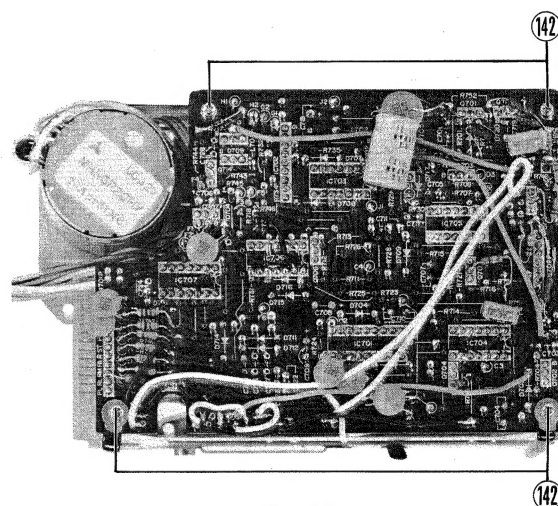


Fig. 11

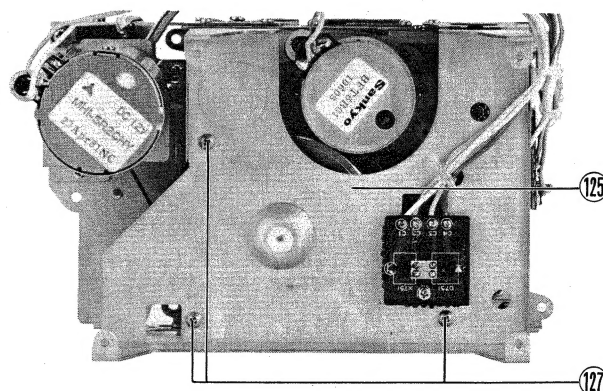


Fig. 12

H. Capstan motor ⑤③ (Fig. 13)

1. Remove the capstan belt ①②② .
2. Remove 3 screws ⑥① with motor bracket.
3. Remove the rubber stopper, and then turn the motor to inside.

I. Reel motor ⑦③ (Fig. 13)

Remove 2 screws ⑦⑥ .

J. Flywheel ass'y ①①⑦ (Fig. 13)

Remove the take-up belt and capstan belt.

(When replacing the flywheel, be sure to employ washers. Be careful not to soil the belt.)

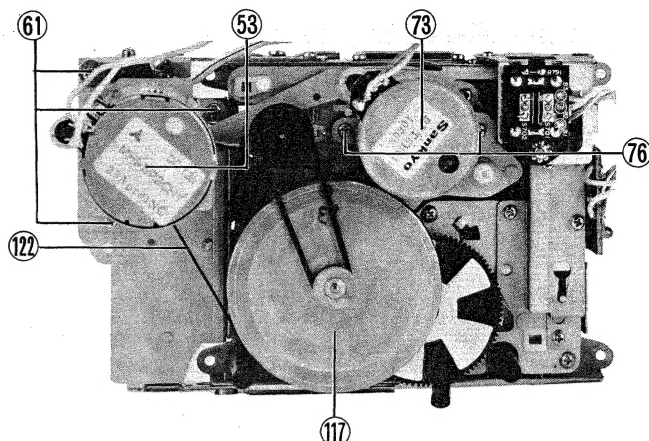


Fig. 13

K. Reel disk ass'y ② (Fig. 14)

1. Remove the reel motor, flywheel ass'y and counter belt.
2. Remove 3 screws ⑦⑦ .

L. Drive gear ass'y ①⑥ (Fig. 14)

1. Remove the flywheel ass'y.
2. Remove 3 screws ⑧⑥ .

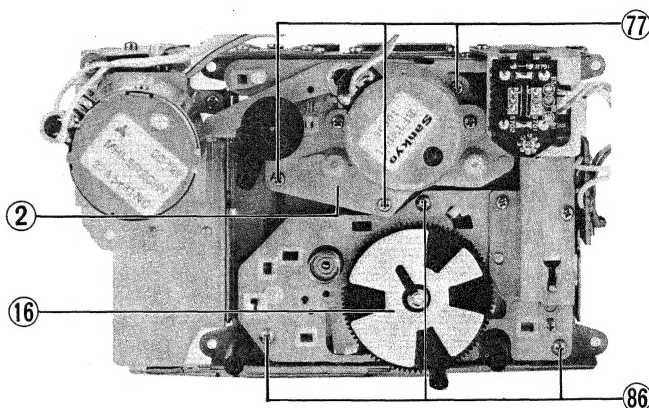


Fig. 14

How to Engage Dial Cord

1. Turn the dial drum fully counterclockwise (to the lowest frequency).
2. Use Kevlar cord (1,680 mm long and 0.5 mm in diameter).
3. Install the string in the sequence of the numbers.
4. Wind 2 turns to the tuning shaft and the drum.

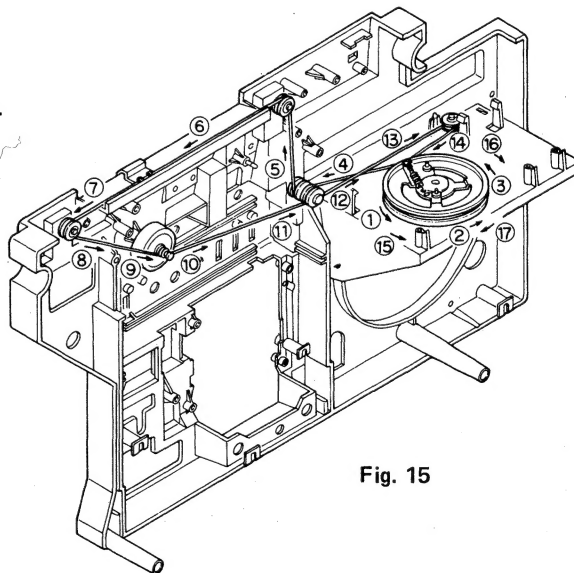


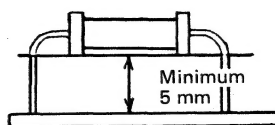
Fig. 15

Safety Precautions

⚠ Safety mark

Safety is very important with this unit. When replacing the parts marked ⚠, be sure to use only those designated parts. The designated resistors, diodes, transistors become hot in use. When replacing, be sure to secure them with a distance of more than 5 mm from the circuit board. In addition, they are banded together to avoid touching other wiring, recheck this point as well after repair.

The wiring of the primary side should be wound more than one and half times, then soldered.



To protect the circuit board from burning while in use.

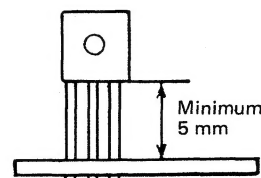


Fig. 16

Tuner Alignment

Output Measuring: Speaker terminal (Impedance = 6Ω), output level 50 mW (0.55 V/6 Ω)

AM IF & RF Alignment

Input (SSG) Modulation 400 Hz, Modulated to 30%

Step	Frequency Band	Input Signal		Place to be aligned	Set the V. Capacitor to
		Frequency	Given to		
1	MW	455 kHz	Loop Antenna	T3, 4, 5 Input; TP-3 Output; TP-4, TP-5	Minimum
2	(IF)	Repeat the Step 1, and adjust for no further improvement.			
3	MW	520 kHz	Loop Antenna	L8	Maximum
4		1650 kHz		TC8	Minimum
5		Repeat the Steps 3 & 4.			
6		620 kHz	Loop Antenna	L1	620 kHz Signal
7		1400 kHz		TC1	1400 kHz Signal
8		Repeat the Steps 6 & 7, and adjust for no further improvement.			
9	LW	145 kHz	Loop Antenna	L9	Maximum
10		360 kHz		TC9	Minimum
11		Repeat the Steps 9 & 10			
12		160 kHz	Loop Antenna	L2	160 kHz Signal
13		350 kHz		TC2	350 kHz Signal
14		Repeat the Steps 12 & 13, and adjust for no further improvement.			
15	SW1	1.55 MHz	Loop Antenna	L10	Maximum
16		3.7 MHz		TC10	Minimum
17		Repeat the Steps 15 & 16.			
18		1.6 MHz	Loop Antenna	L3	1.6 MHz Signal
19		3.5 MHz		TC3	3.5 MHz Signal
20		Repeat the Steps 18 & 19 and adjust for no further improvement.			
21	SW2	3.4 MHz	Rod Antenna through Dummy Antenna	L11	Maximum
22		6.3 MHz		TC11	Minimum
23		Repeat the Steps 21 & 22.			
24		3.5 MHz	Rod Antenna through Dummy Antenna	L4	3.5 MHz Signal
25		6.0 MHz		TC4	6.0 MHz Signal
26		Repeat the Steps 24 & 25 and adjust for no further improvement..			
27	SW3	5.9 MHz	Rod Antenna through Dummy Antenna	L12	Maximum
28		6.3 MHz		TC12	Minimum
29		Repeat the Steps 27 & 28.			
30		5.9 MHz	Rod Antenna through Dummy Antenna	L5	5.9 MHz Signal
31		6.3 MHz		TC5	6.3 MHz Signal
32		Repeat the Steps 30 & 31 and adjust for no further improvement.			
33	SW4	5.8 MHz	Rod Antenna through Dummy Antenna	L13	Maximum
34		11.5 MHz		TC13	Minimum
35		Repeat the Steps 33 & 34.			
36		6.0 MHz	Rod Antenna through Dummy Antenna	L6	6.0 MHz Signal
37		11.0 MHz		TC6	11.0 MHz Signal
38		Repeat the Steps 36 & 37 and adjust for no further improvement.			
39	SW5	10.7 MHz	Rod Antenna through Dummy Antenna	L14	Maximum
40		19.0 MHz		TC14	Minimum
41		Repeat the Steps 39 & 40.			
42		12.0 MHz	Rod Antenna through Dummy Antenna	L7	12.0 MHz Signal
43		18.0 MHz		TC7	18.0 MHz Signal
44		Repeat the Steps 42 & 43 and adjust for no further improvement.			

FM IF & Discriminator Alignment

Input (Sweep Generator) : TP1 (hot)

Output (Oscilloscope) : IF TP2 (hot) & TP5
Discriminator TP2 (hot) & TP5

Step	Mode	Place to be aligned	Wave form
1	IF	T1	Fig. A
2	Discriminator	T2	Fig. B

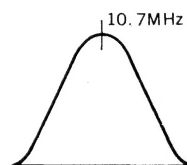
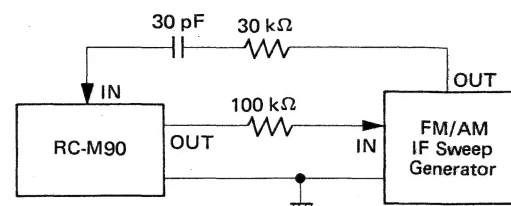


Fig. A

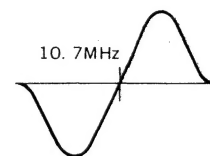


Fig. B

FM RF AlignmentInput (SSG): Use 75 Ω terminal, modulation 400 Hz modulated to 22.5 kHz deviation. Connect Hot side to TP6 and Cold side to TP7.

Step	Frequency Band	Input Signal		Place to be aligned	Set the V. Capacitor to
		Frequency	Given to		
1	FM	87.5 MHz	TP6 & TP7	L16	Maximum
2		109 MHz		TC16	Minimum
3		Repeat the Steps 1 & 2.			
4		90 MHz	TP6 & TP7	L15	90 MHz Signal
5		106 MHz		TC15	106 MHz Signal
6		Repeat the Steps 4 & 5, and adjust for no further improvement.			

FM MPX Alignment**A. 19 kHz Alignment (regular Method)**

1. Connect a frequency counter to the test point TP8.
2. Adjust the variable resistor VR1 so that the frequency becomes 19 kHz \pm 250 Hz.

B. 19 kHz Alignment (Simplified Method)

1. Turn to an FM stereo broadcast.
2. Set the variable resistor VR1 to the center position of the range in where the stereo indicator keeps lighting.

C. Separation Alignment

1. Connect an FM stereo signal generator across the test points TP2 (98 MHz, 60 dB).
2. Connect an Electronic voltmeter or oscilloscope across the test points TP8.
3. Adjust the variable resistor VR2 to minimize the output of right channel signal.

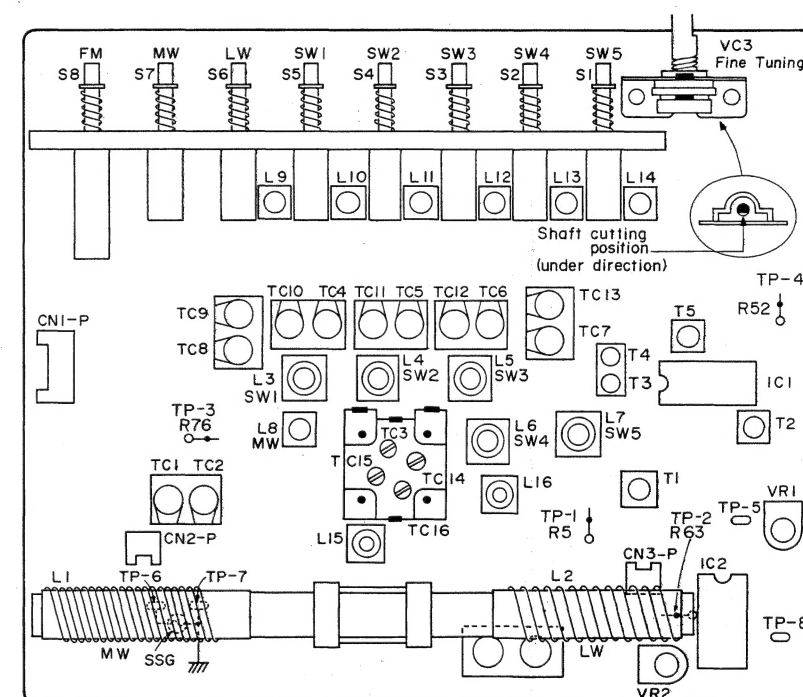
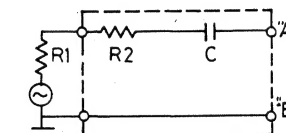
Parts Arrangement for Alignment

Fig. 17

Dummy Antenna

$$R1 + R2 = 80 \Omega$$

$$C = 10 \text{ pF}$$

R1 : Output impedance of S.S.G.

Adjustment of Cassette Recorder Amplifier

Basic conditions:

Source power : 15 V DC
Measurement : at LINE OUT terminals
Switch setting : Select SW ; TAPE
MODE SW ; STEREO
Beat cut ; "1" (Normal)
PHONO/LINE IN select SW ; LINE IN

Adjust in the following sequence.

<p>1 Head azimuth Connect an oscilloscope to the DIN jack. Using test tape VTT-658 (10 kHz, -15dB), adjust so the phase difference between the L and R output is 0° and maximize the output level at the same time.</p>								
<p>2 Tape speed Connect a frequency counter to the DIN jack. Playing back test tape VTT656 (3,000 Hz), adjust the semi-fixed resistor in the motor so that the frequency counter reads 3,010 ± 10 Hz.</p>								
<p>3 Playback level Connect an electronic voltmeter to the DIN jack. Playing back test tape VTT664 (1 kHz, 16 mV), adjust VR101 and VR201 so that the L and R output levels become 300 mV.</p>								
<p>4 Level meter gain After adjustment item 3, playback test tape VTT664 (1 kHz 16 mV). Adjust VR301 and VR401 on the main amp. P.W. board so that level meter gain becomes 0 VU.</p>								
<p>5 Erase current (METAL tape used) Connect an electronic voltmeter to TP501 (R540 both sides). Check erase current so that it becomes more than 95 mV/1 Ω (95 mA). If its current becomes more than 120 mA, unsold R524 (10 Ω) to open the pattern circuit.</p>								
<p>6 Bias frequency (Tape = METAL) Connect a frequency counter TP101 (R159 both sides). Adjust L501 so that the counter reads 68 kHz. After adjustment, connect R540 (1 Ω).</p>								
<p>7 Bias current (1) Connect an electronic voltmeter to TP101 (R159) and TP201 (R259). Adjust following conditions.</p> <table><tr><td>[at metal tape</td><td>..... 7 mV/10 Ω (700 μA)</td><td>— VR105, VR205]</td></tr><tr><td>[at normal tape</td><td>..... 3 mV/10 Ω (300 μA)</td><td>— VR104, VR204]</td></tr></table>	[at metal tape 7 mV/10 Ω (700 μA)	— VR105, VR205]	[at normal tape 3 mV/10 Ω (300 μA)	— VR104, VR204]		
[at metal tape 7 mV/10 Ω (700 μA)	— VR105, VR205]						
[at normal tape 3 mV/10 Ω (300 μA)	— VR104, VR204]						
<p>8 Recording current (Tape = NORMAL) Volume control = MAX. Apply 1 kHz (-16 dBs) to the DN jack Adjust VR103 and VR203 so that the level meter reads 0 VU.</p>								
<p>9 Bias current (2) Record 1 kHz, 10 kHz (-36 dBs) signals to the DIN jack. Play back the recorded part. Adjust following conditions.</p> <table><tr><td>1 kHz (reference)</td><td>..... 10 kHz</td><td>- $\frac{+1}{-0}$ dB</td></tr><tr><td>at metal tape</td><td>..... VR105, 205</td><td rowspan="2">) mini. adjustment</td></tr><tr><td>at normal tape</td><td>..... VR104, 204</td></tr></table>	1 kHz (reference) 10 kHz	- $\frac{+1}{-0}$ dB	at metal tape VR105, 205) mini. adjustment	at normal tape VR104, 204
1 kHz (reference) 10 kHz	- $\frac{+1}{-0}$ dB						
at metal tape VR105, 205) mini. adjustment						
at normal tape VR104, 204							

Adjustment location (Amplifier circuit)

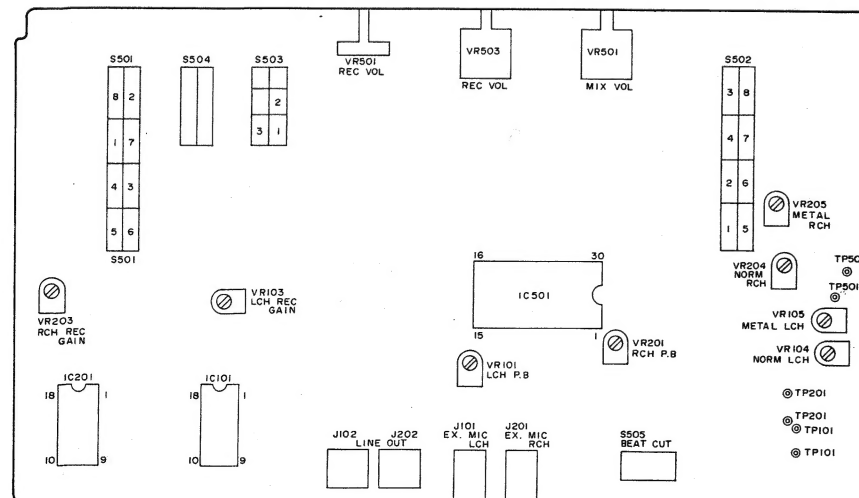


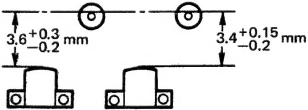
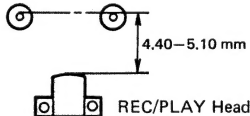


Fig. 18

Adjustment of Cassette Mechanism

Check the following items after cassette mechanism parts are replaced.

Item	Requirements	Test equipment	Test tape
1. Source voltage	Rated voltage: 15 V DC Motor operating voltage range: 10–15 V DC	Regulated power supply	—
2. Tape speed	4.8 cm/sec + 2% (3,000 Hz) – 2% Deviation 1%	Frequency counter (digital counter)	VTT-656
3. Wow & flutter	Less than 0.16% (RMS)	Wow meter	VTT-656
4. Take-up torque	PLAY 40–70 g.cm FF more than 80 g.cm REW more than 80 g.cm	During FF and rewind, the idlers, reels and flywheel should not slip against each other when the reels are locked. Torque dial gauge	—
5. Current consumption (of motor alone)	PLAY 170 mA or less FF 250 mA or less REW 250 mA or less	DC ammeter	C-60 (Take-up torque should be normal when tape is used.)
6. Pinch roller pressure	300–450 g	Tension gauge Pull the pinch roller perpendicularly and read the gauge when the pinch roller just stops. 	—
7. Axial clearance of flywheel		Clearance gauge	—
8. Head position during PLAY and RECORD		During PLAY (RECORD) the dimensional requirements given here must be met, and the heads must not contact the cassette case.	Any cassette tape
9. Head position during cueing		The dimensional requirement given here must be met when the PLAY and FF (REW) buttons are locked simultaneously.	—
10. Auto-stop operation	The facility should operate with a reduced voltage of 8.0 V at the end of tape during PLAY/RECORD, FF, and REW. During REC, a load the same as that of the amplifier is applied.		Any cassette tape
11. Review operation	Check the following repeated operations. 1. At playback. 2. Push on the REVIEW (REW) button. 3. Check to remove the pinch roller from the capstan shaft. 4. Check to remove the take-up pulley from its reel and to touch the REW roller to supply reel. 5. Rewind the tape to supply reel. 6. Push off the REVIEW (REW) button.		—
12. Cueing operation	Checking the following repeated operations. 1. At playback. 2. Push on the CUE (FF) button. 3. Check to remove the pinch roller from the capstan shaft. 4. Check to remove the take-up pulley and to touch the FF idler to take-up reel. 5. Fast forward the tape to take-up reel. 6. Push off the CUE (FF) button.		—

Block Diagrams

A. Tuner Circuit

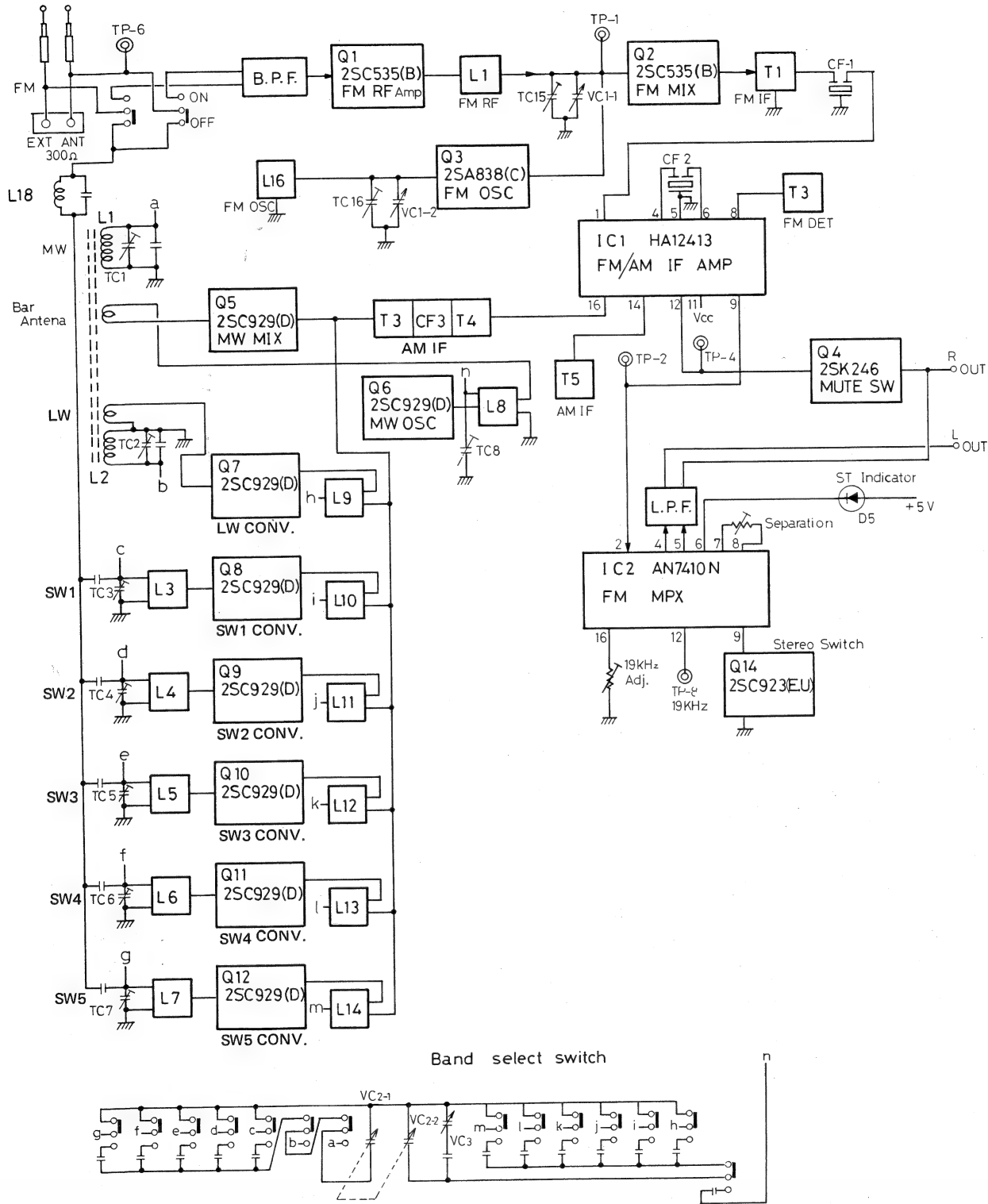


Fig. 19

B. Pre-Amplifier Circuit

At recording

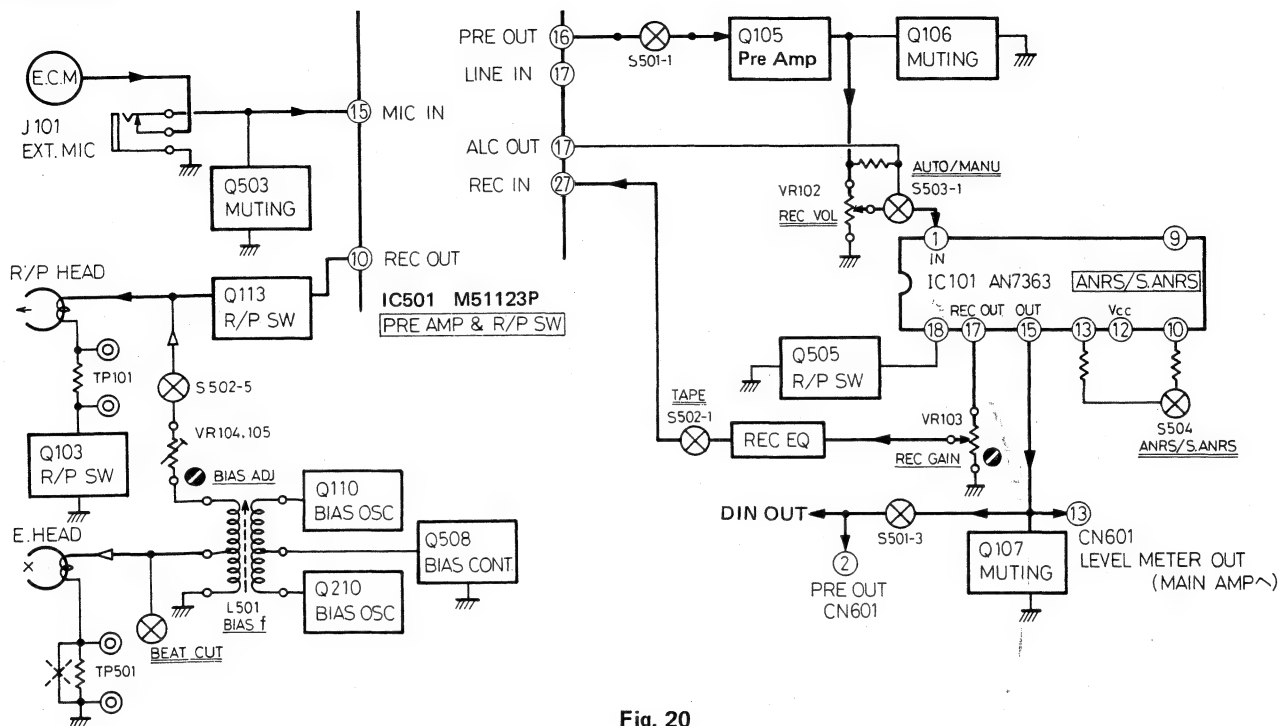


Fig. 20

At playback

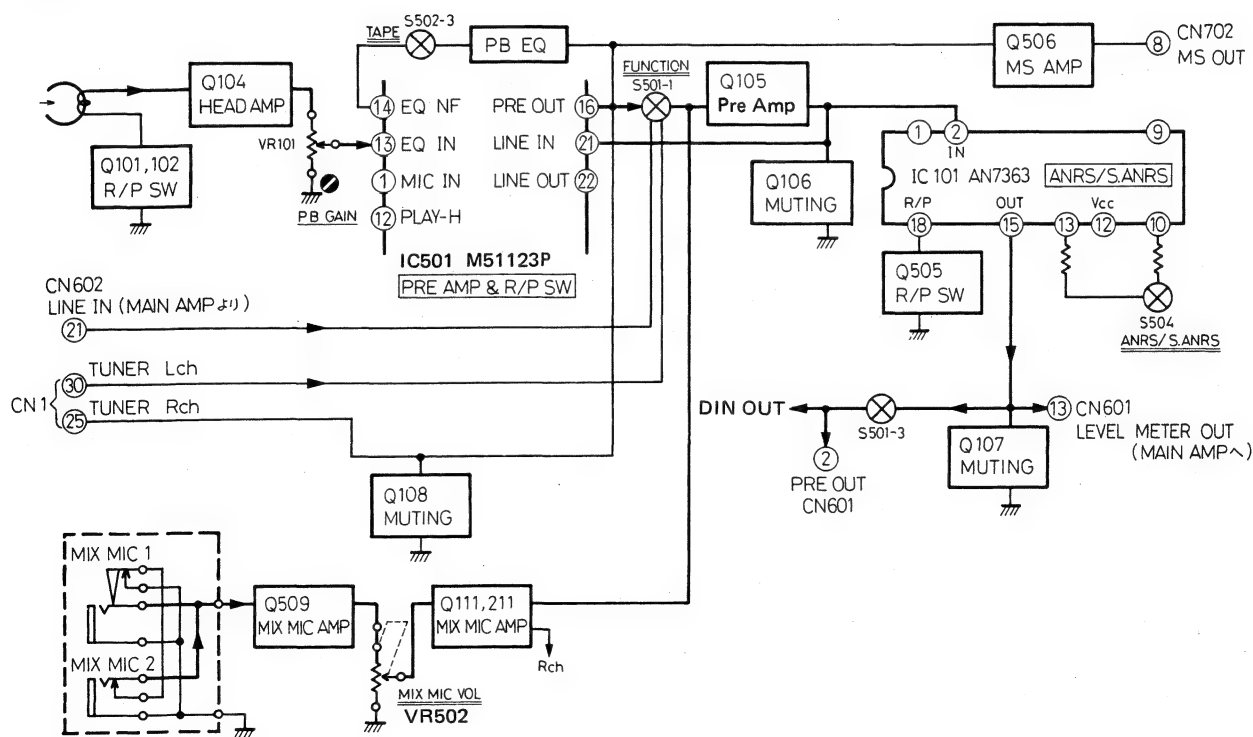


Fig. 21

C. Main Amplifier Circuit

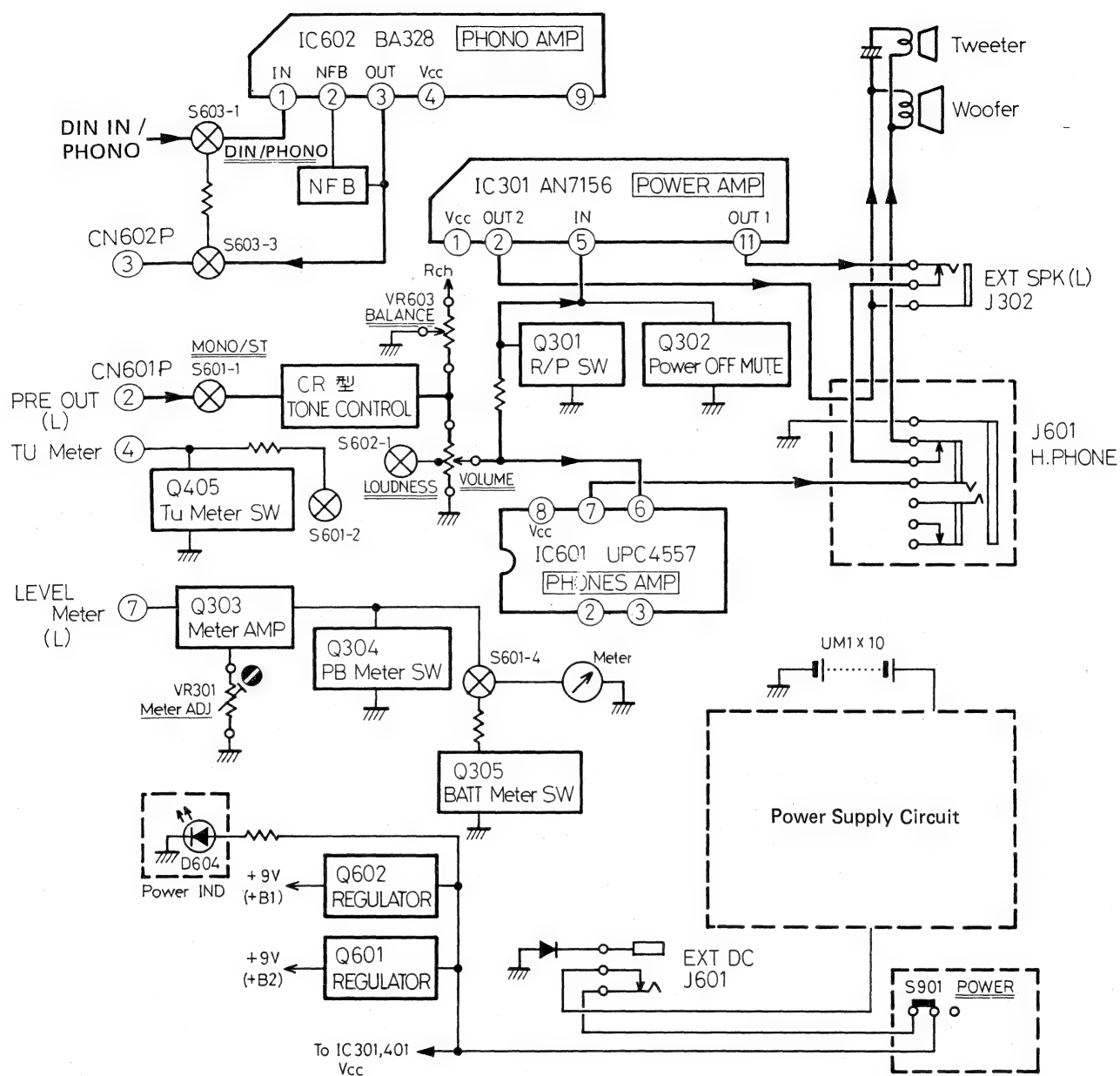


Fig. 22

D. Mecha. Control Circuit

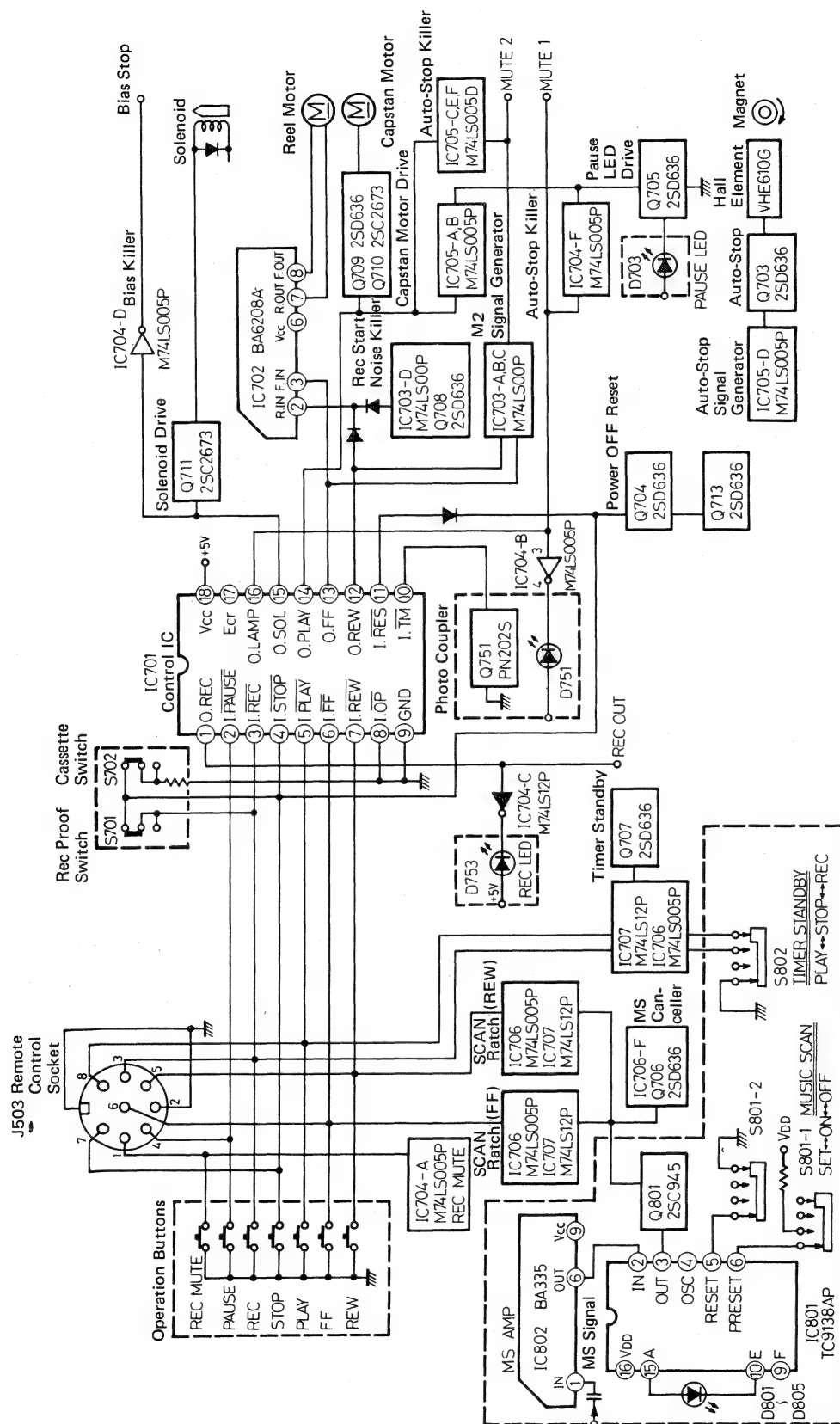
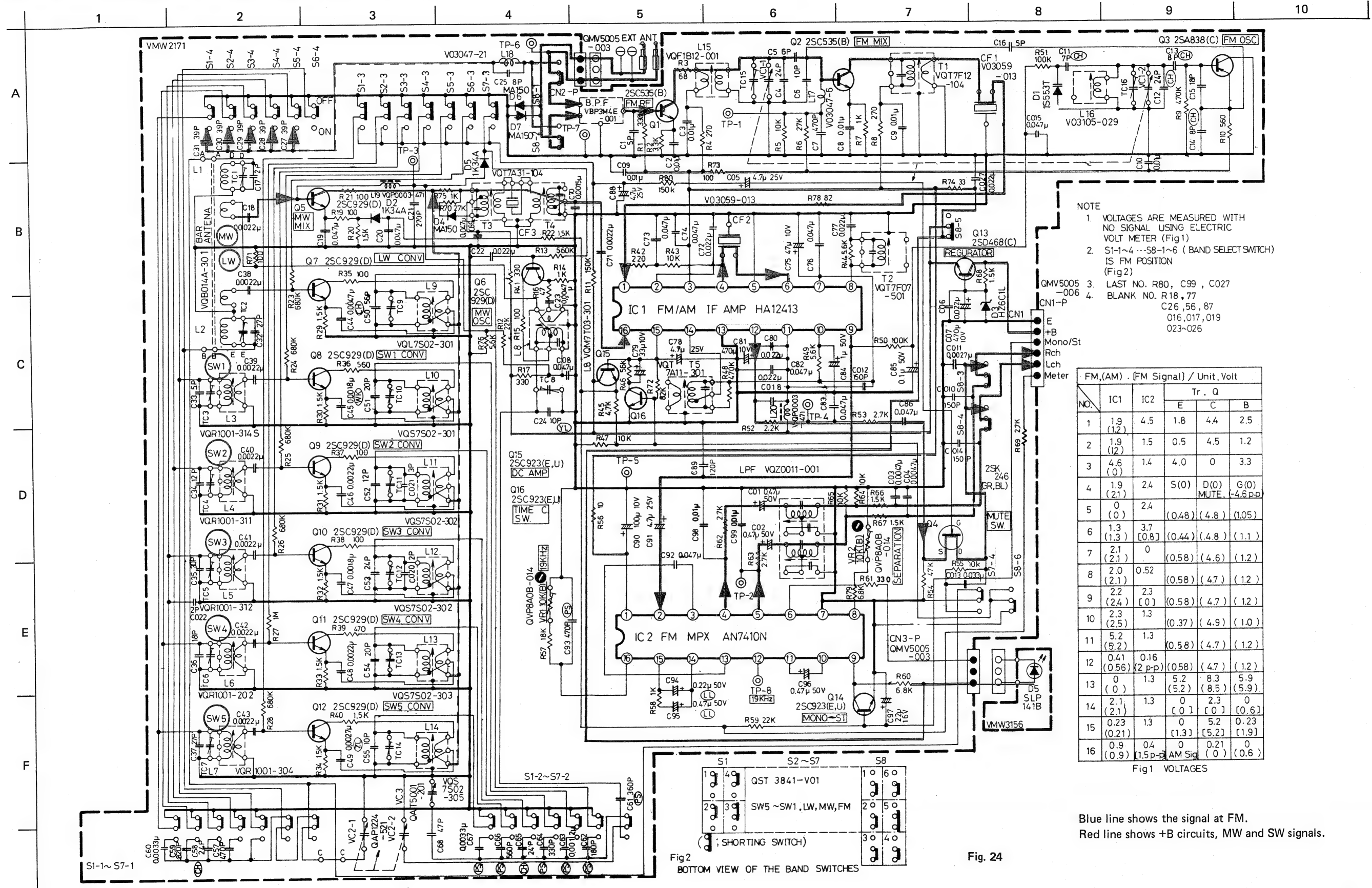


Fig. 23

Standard Schematic Diagram of RC-M90 (Tuner Circuit)



Standard Schematic Diagram of RC-M90 (Pre-Amp Circuit)

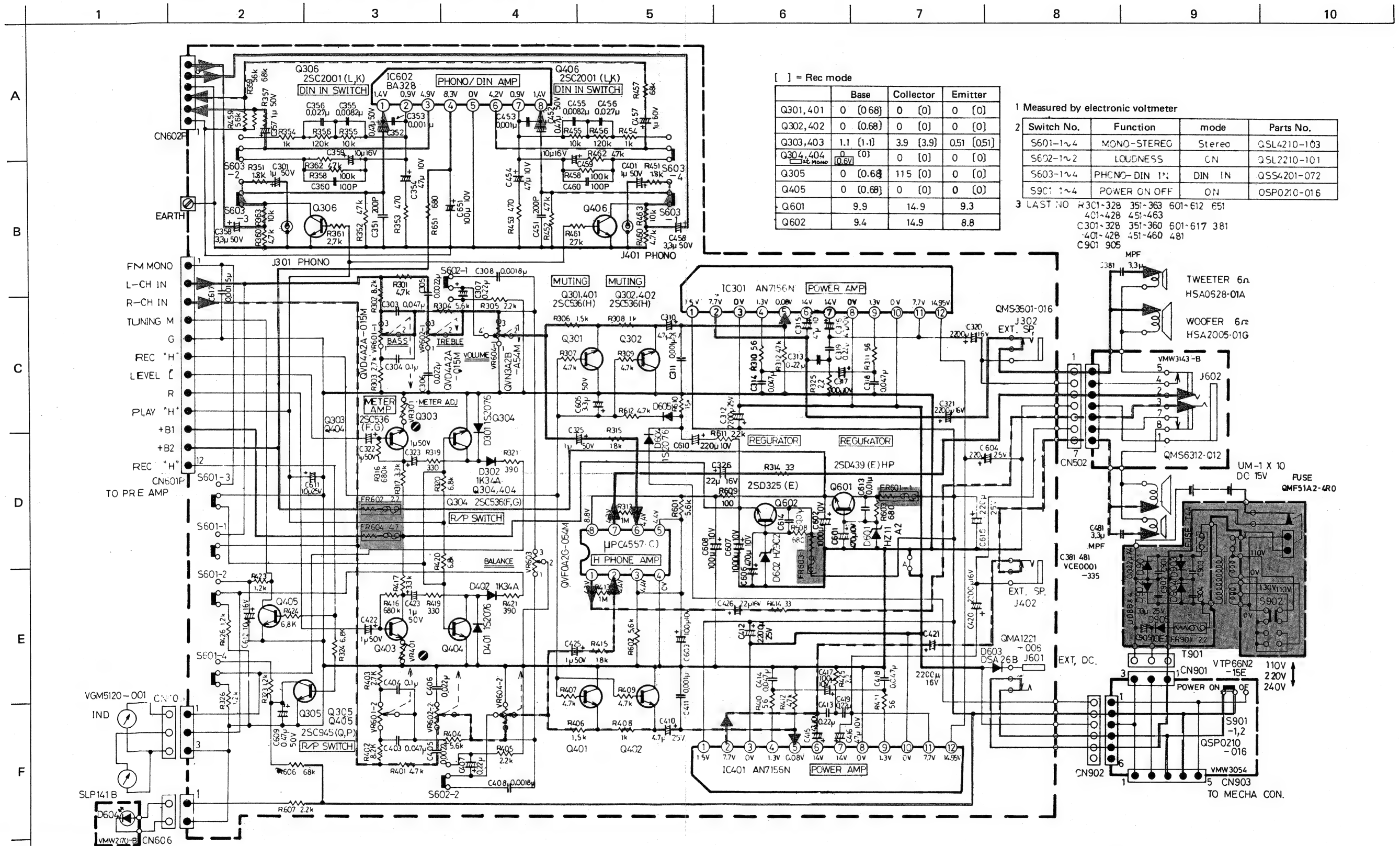


Fig. 25

Standard Schematic Diagram of RC-M90 (Main Amp Circuit)

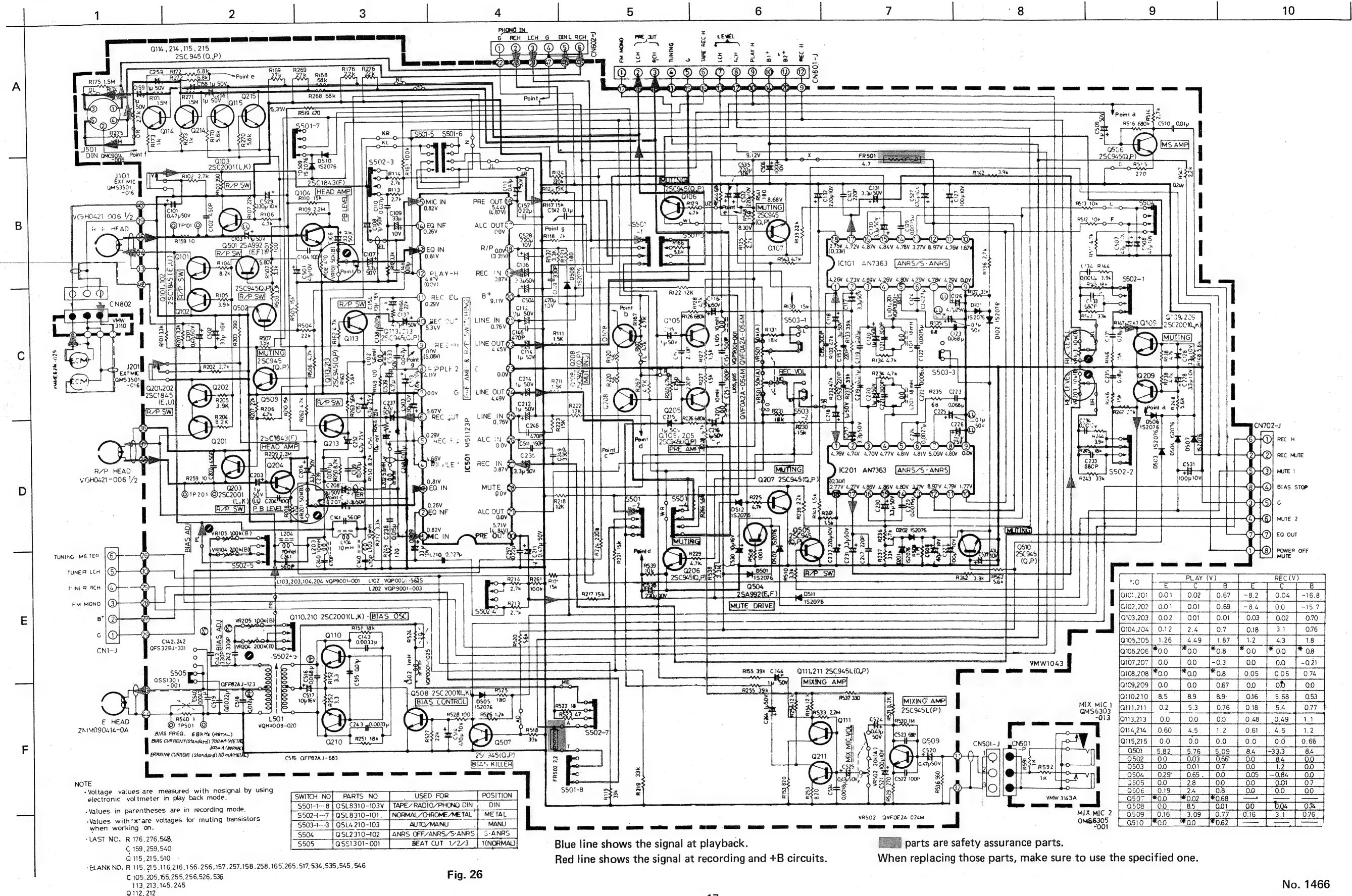
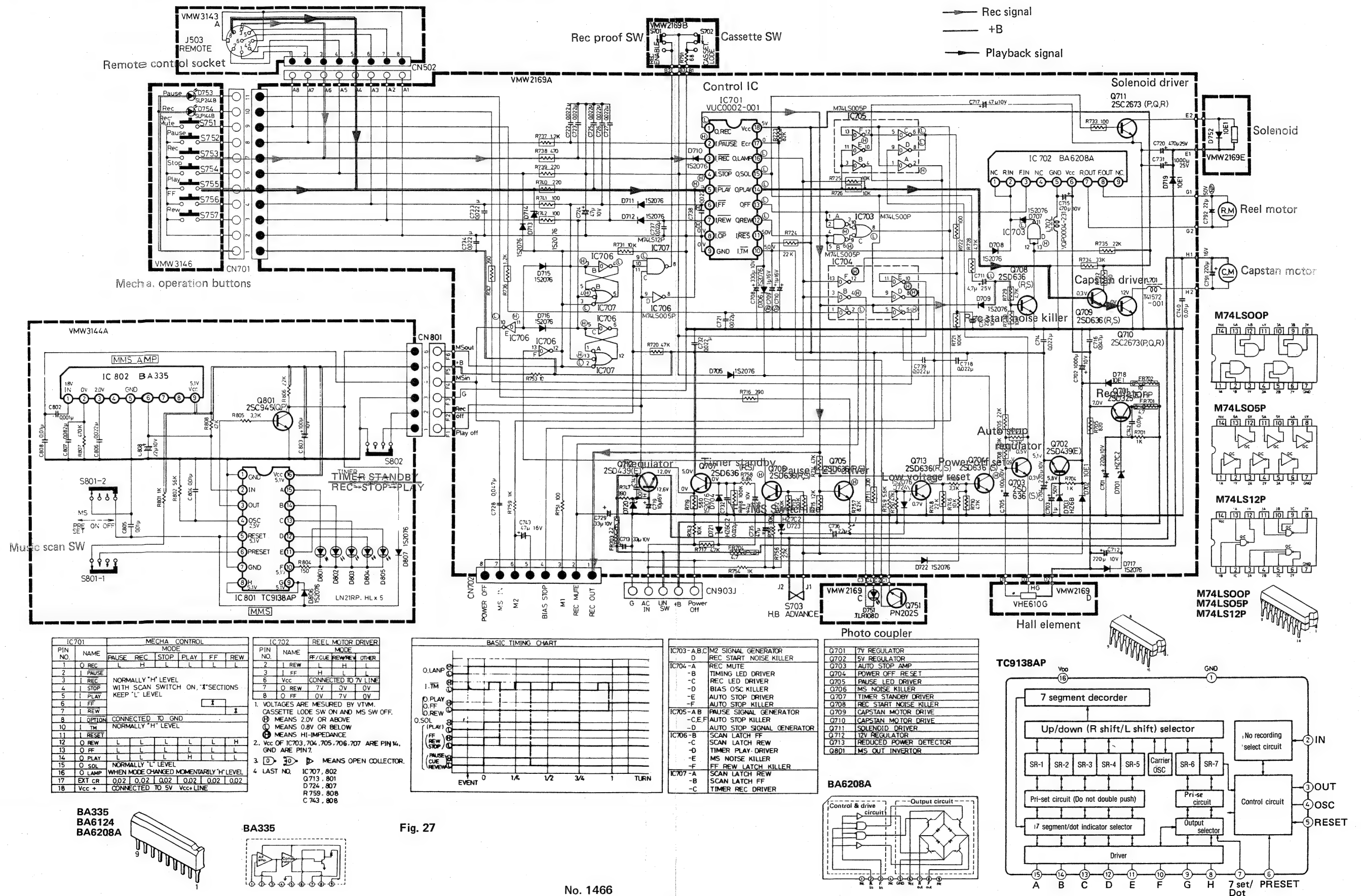


Fig. 26

Standard Schematic Diagram of RC-M90 (Mecha. Control Circuit)



Wiring Connection of RC-M90 (1)

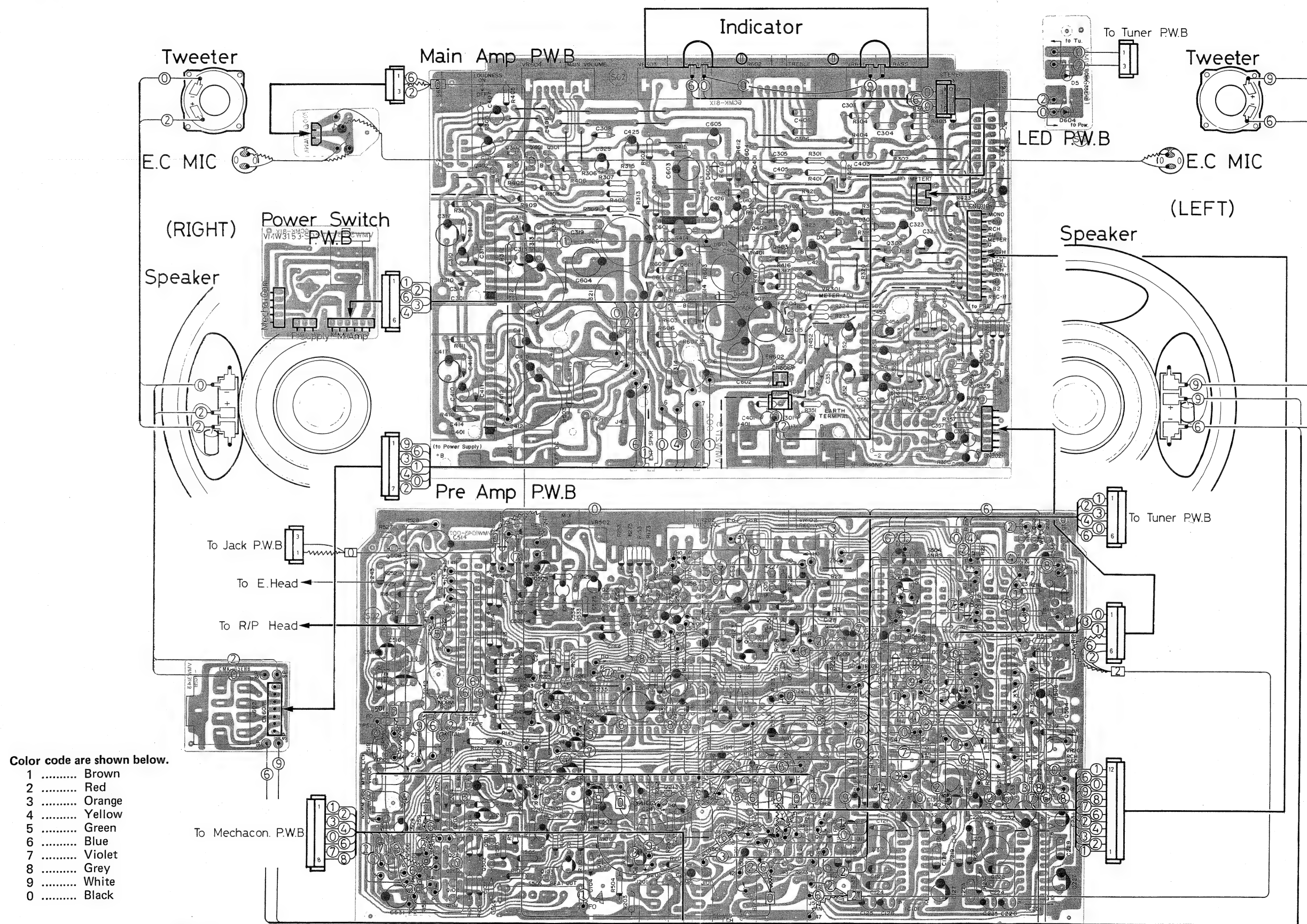


Fig. 28

Wiring Connection of RC-M90 (2)

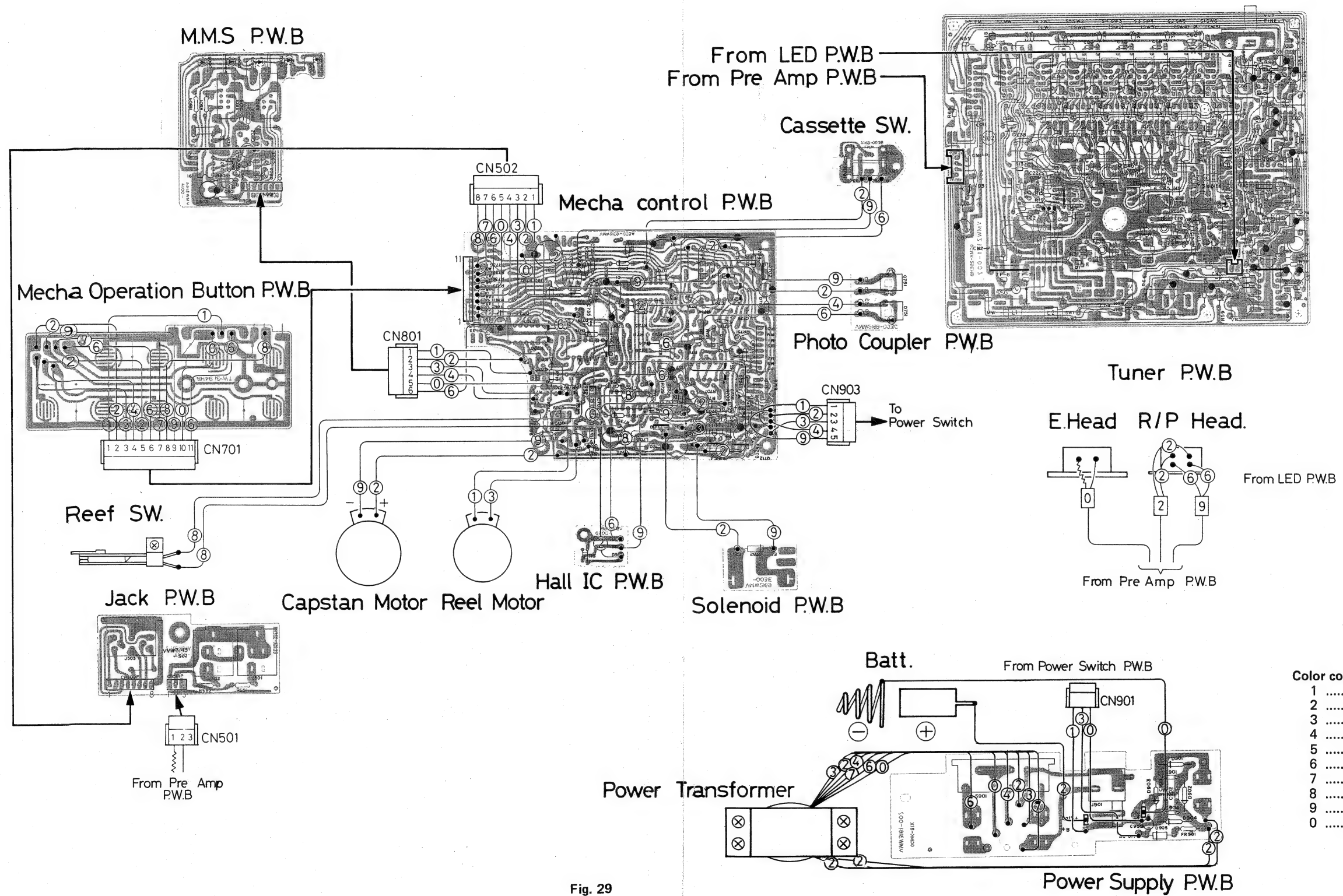


Fig. 29

Rear Cabinet Parts

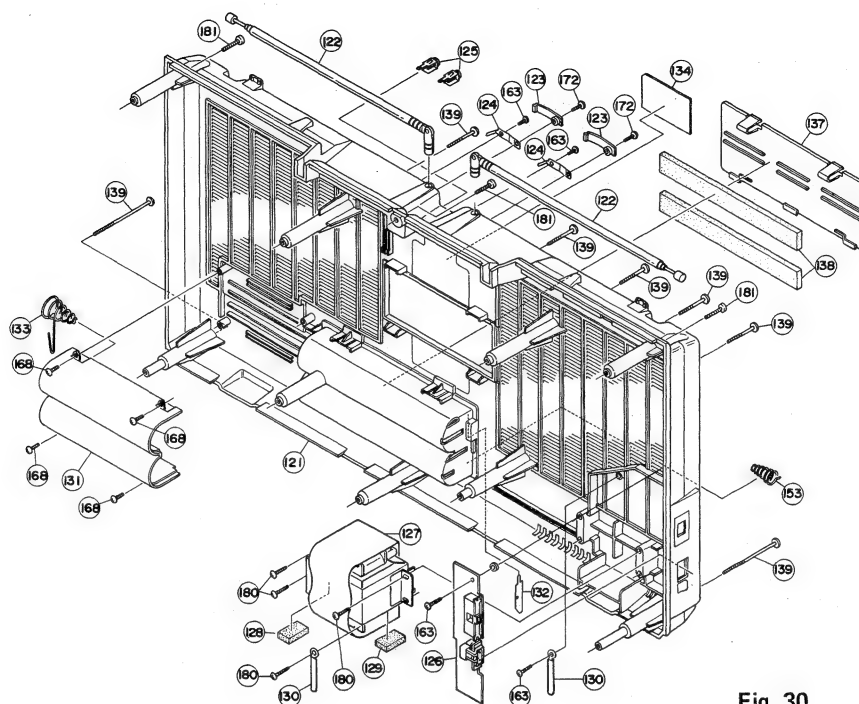


Fig. 30

Rear Cabinet Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
121, 134		ZCRCM90L-CBR	Rear Cabinet Ass'y		1
121		VJC0002-003	Rear Cabinet		1
122		QZR4234-001U	Rod Antenna		2
123		VJD4508-001	Ant. Cover		2
124		VYH4775-001	Rod Ant. Holder		2
125		V44814-00B	Terminal Ass'y		2
126		—	Power Supply P.W.B. Ass'y		1
127	⚠	VTP66N2-15EBS	Power Transformer	T901, RC-M90LB	1
	⚠	VTP66C2-15E	"	T901, RC-M90L	1
128		VYSR108-005	Spacer		3
129		VYSR105-005	"		2
130		VKZ4001-011	Wire Holder		1
131		VYH3198-001	Batt. Holder		1
132		VYH4010-001	Contact		1
133		VYH4011-001	Battery Spring		2
134		VYN5072-004Q	Name Plate	RC-M90LB	1
		" -005Q	"	RC-M90L	1
137		VJC3004-003	Batt. Cover		1
138		VYSH106-020	Spacer		2
139		VKZ4008-002	Special Screw		7
158		53738-1	Spring		1
163		SBSF3010Z	Screw	Power P.W.B. — Rear x 1, Rod Ant. Holder x 2	3
168		SBSF3012Z	"	Batt. Holder	4
172		SBSF3012R	"	Rear — Cover	2
180		SBSF4020C	"	Trans. — Rear	4
181		SBSF4018R	"	Rear — Front	3

Enclosure Assembly and Electrical Parts List

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
1 ~		ZCRCM90L-CBF	Front Cabinet Ass'y		1
1		VJC0001-004	Front Cabinet		1
2		VJD2177-001	Speaker Ring		2
3		VJD3280-001	Punching Panel		2
4		HSA2005-01G	Speaker	Woofer	2
5		VKZ4001-002	Wire Holder		3
6		VJD4502-001	Tweeter Panel		2
7		VJD3281-001	Tweeter Frame		2
8		HSA0628-01A	Speaker	Tweeter	2
9		VCE0001-335	M.P.F. Capacitor	C381, 481 (3.3 μF)	2
10		VJD4503-001	Mic Panel		2
11		VMME62N-029	E.C. Mic		2
12		VYH4348-001	Mic Bushing		2
13		VYH4298-001	Holder		2
14		—	Connector P.W.B.		1
15		VJD4504-002	Plate (L)	BAND	1
16		VJD4505-003	Plate (R)	POWER	1
17		VJD3282-001	Side Fitting (L)		1
18		VJD3282-002	Side Fitting (R)		1
19		VJD4506-002	Counter Lens		1
20-1		—	Power Switch P.W.B. Ass'y		1
20		VXP4135-001	Push Knob		1
21		VYH4763-001	SW. Bracket		1
22		VKZ4001-010	Wire Holder		2
23		VYH4764-001	MMS. Bracket		1
23-1		—	MMS. Board P.W.B. Ass'y		1
24		VXQ4045-001	Eject Lever		1
25		VYH4765-001	Socket Bracket		1
26		QMC0888-010	DIN Socket		1
27		—	Socket P.W.B. Ass'y		1
28		VKZ4150-001	Special Nut		1
29		—	Jack P.W.B. Ass'y		1
30		VYH4766-001	Jack Holder		1
31		VKZ4150-001	Special Nut		1
32		VJT3069-00A	Cassette Door Ass'y		1
33		VJT3070-00A	Door Lens Ass'y		1
34		VKW4218-001	Door Spring		1
35		VYH4767-001	Door Holder		2
36		VYH4768-001	Damp Holder		1
37		VYH4769-001	Gear		1
38		VJD3284-002	Button Frame		1
39		VYH3195-001	Rubber		1
40		—	LED P.W.B. Ass'y		1
41		VXP4136-002	Button	FF	1
42		" -003	"	Rec	1
43		" -004	"	Pause	1
44		" -005	"	Rec Mute	1
45		VXP4137-001	"	Stop	1
46		" -002	"	Play	1
47		VXP4136-001	"	Rew.	1
48		VYH4770-001	Cap		9
50		VXL4152-001	Tuning Knob		1
51		VXL4153-001	Volume Knob		6
52		VXL4154-001	"	MAIN	1
53		VXQ4046-001	Lever Knob		6
54		VXQ4047-001	"	MMS Meter	2
55		VXL4161-001	Knob	FINE	1

Enclosure Assembly and Electrical Parts (1)

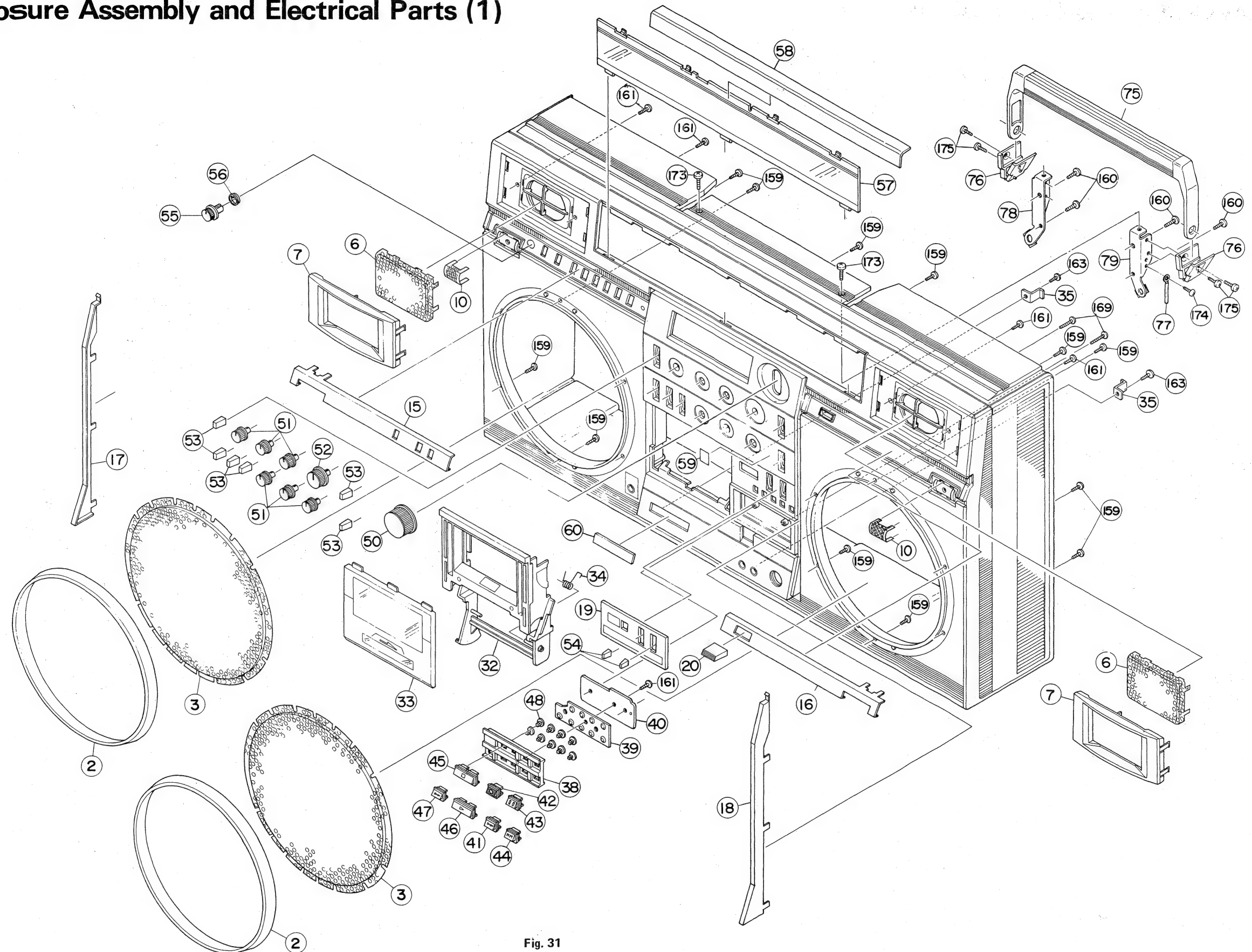


Fig. 31

Enclosure Assembly and Electrical Parts (2)

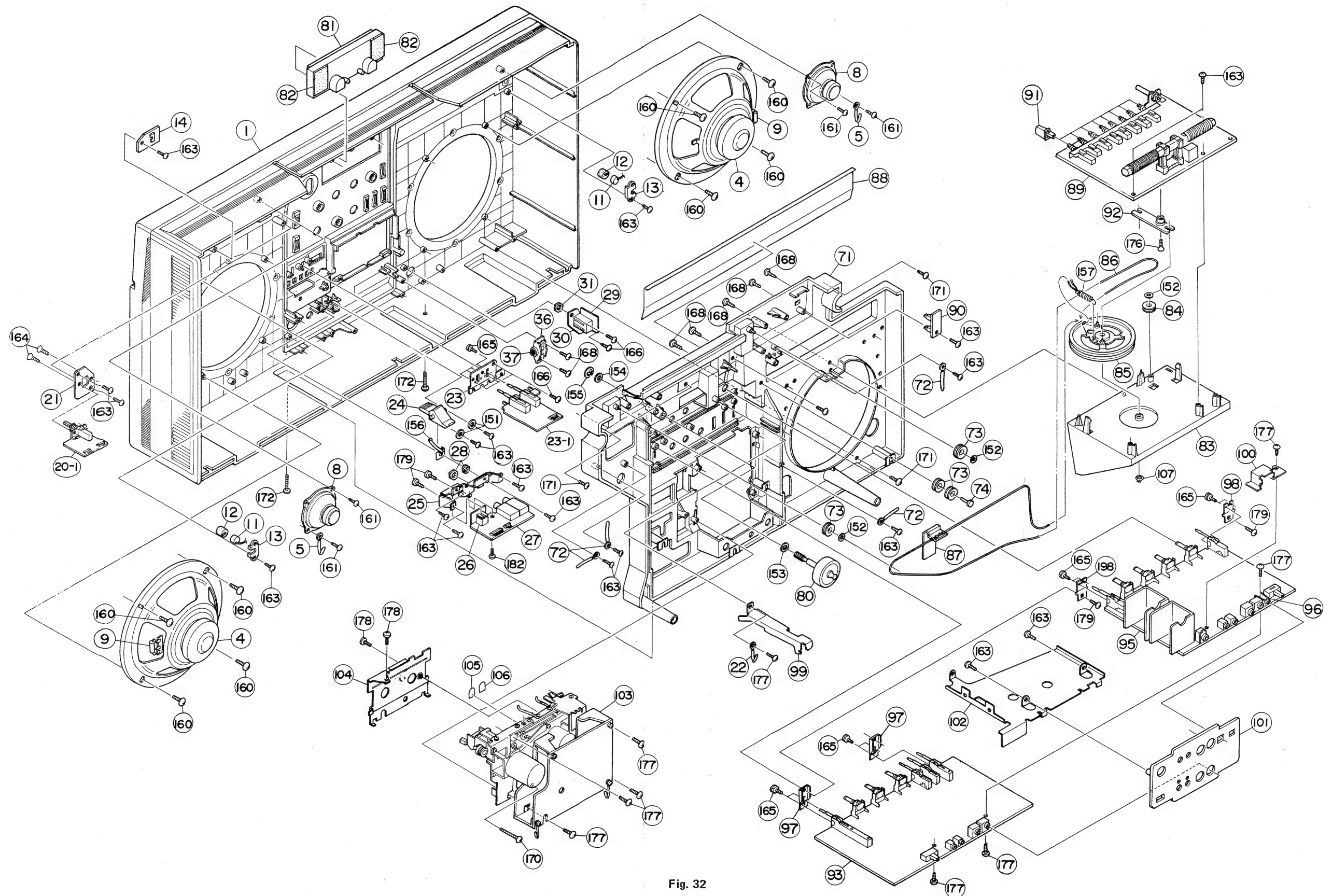


Fig. 32

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
56		VYH4575-002	Knob Holder		1
57		VJK3178-001	Dial Lens		1
58		VJK4143-001	Lens Plate		1
59		VND4006-010	Caution Label		1
60		QXM2251-001	Mark		1
71		VYH1123-001	Chassis		1
72		VKZ4001-011	Wire Holder		4
73		VYH4032-001	Roller		4
74		VYH4774-001	Stud		1
75		VJH3005-00Q	Handle Ass'y		1
76		VYH4771-001	Supporter		2
77		VKZ4001-010	Wire Holder		1
78		VYH4772-001	Holder Bracket		1
79		VYH4772-002	"		1
80		VYH4777-00A	Tuning Shaft Ass'y		1
81		VGM5120-001	Indicator	IND301, 401	1
82		VYSR102-009	Spacer	t = 20, 20 x 40 mm, Rubber	2
83		VYH2130-002	Tuning Chassis Ass'y		1
84		VYH4032-001	Roller		1
85		VYH3196-001	Dial Drum		1
86		VHR2TK9-05AT	Dial Rope		1
87		VJN4058-001	Needle		1
88		VJK2132-004	Dial Scale		1
89		—	Tuner P.W.B. Ass'y		1
90		—	LED P.W.B. Ass'y		1
91		VXP4143-002	Push Button	Band	8
92		VYH4810-001	Arm		1
93		—	Pre-Amp. P.W.B. Ass'y		1
94		QHX2075-001	Wire Clamp	Pre-Amp. P.W.B. x 8, Amp. x 3	11
95		—	Main Amp. P.W.B. Ass'y		1
96		VMZ0001-001	Earth Terminal		1
97		VYH4816-001	C.B. Holder (1)		2
98		VYH4817-001	" (2)		2
99		VYH4901-001	Support Bracket		1
100		VYH4864-001	Bracket		1
101		VJD3283-001	Jack Board		1
102		VYH3207-001	Shield		1
103		—	Mecha. Ass'y		1
104		VJD4507-001	Cassette Plate		1
105		VND4012-002	Head Plate	R/P Head	1
106		THC037417-02	"	E. Head	1
107		RCSA6000	C. Ring		1
108		VKZ4001-011	Wire Holder	Dial Scale x 5, Jack Board x 1	6
109		VKC5145-003S	Counter Reset Button		1
151		Q03091-105	Washer		2
152		WNB2600N	"	Roller x 2, Tuning Chassis Ass'y x 1	3
153		Q03093-840	"		1
154		" -837	"		1
155		REE5000	E-Ring		1
156		VKY4175-001	Spring		1
157		50153-3	"		1
159		SBSF2610Z	Screw	Speaker Ring	12
160		SBSF4010Z	"	Speaker	8
161		SBSF2608Z	"	Tweeter Frame x 4, P.W.B. - Frame x 1	5
163		SBSF3010Z	"	E.C. Mic x 2, Connector P.W.B. x 1, Cabi. — P. SW. Ass'y x 2, Eject Lever x 2, Socket Ass'y — Cabi. x 4, Door Holder x 2 LED Ass'y — Chassis x 1, Shield x 2, Wire Holder x 5	23
164		SSSP3006ZS	"	Power Switch Ass'y	2
165		SSSP3006M	"	SW. — Holder	8

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
166		SBSF3008Z	Screw	Front — MMS. Ass'y x 2, Jack P.W.B. x 2, Speaker x 4	8
167		SPSP3006MS	"	Socket Ass'y x 2, TU chassis — Chassis x 5	7
168		SBSF3012Z	"	Gear	2
169		SBSF2616Z	"	Frame — Cabi.	2
170		SBSF3030V	"	Mecha. — Chassis — F. Cabi.	1
171		SBSF3014C	"	Chassis — F. Cabi.	7
172		SBSF3012R	"	"	2
173		SDSP3008RS	"	"	2
174		SBSB3006Z	"	Wire Holder	1
175		DPSP3018ZS	"	Holder Bracket	4
176		SSSP2608Z	"	Arm	1
177		SBSF3010V	"	Mecha. — Chassis	4
178		SDSB2605R	"	Mecha. Ass'y	2
179		SBSF3012V	"	C.B. Holder — Chassis x 2, Jack Board x 4, Supporter Bracket x 1, TU Chassis — Tu Cabinet x 2	9
182		SBSB3008Z	"	Socket Ass'y	1
183		SSSP3006M	"	Bracket — Switch	4

Mechanical Component Parts

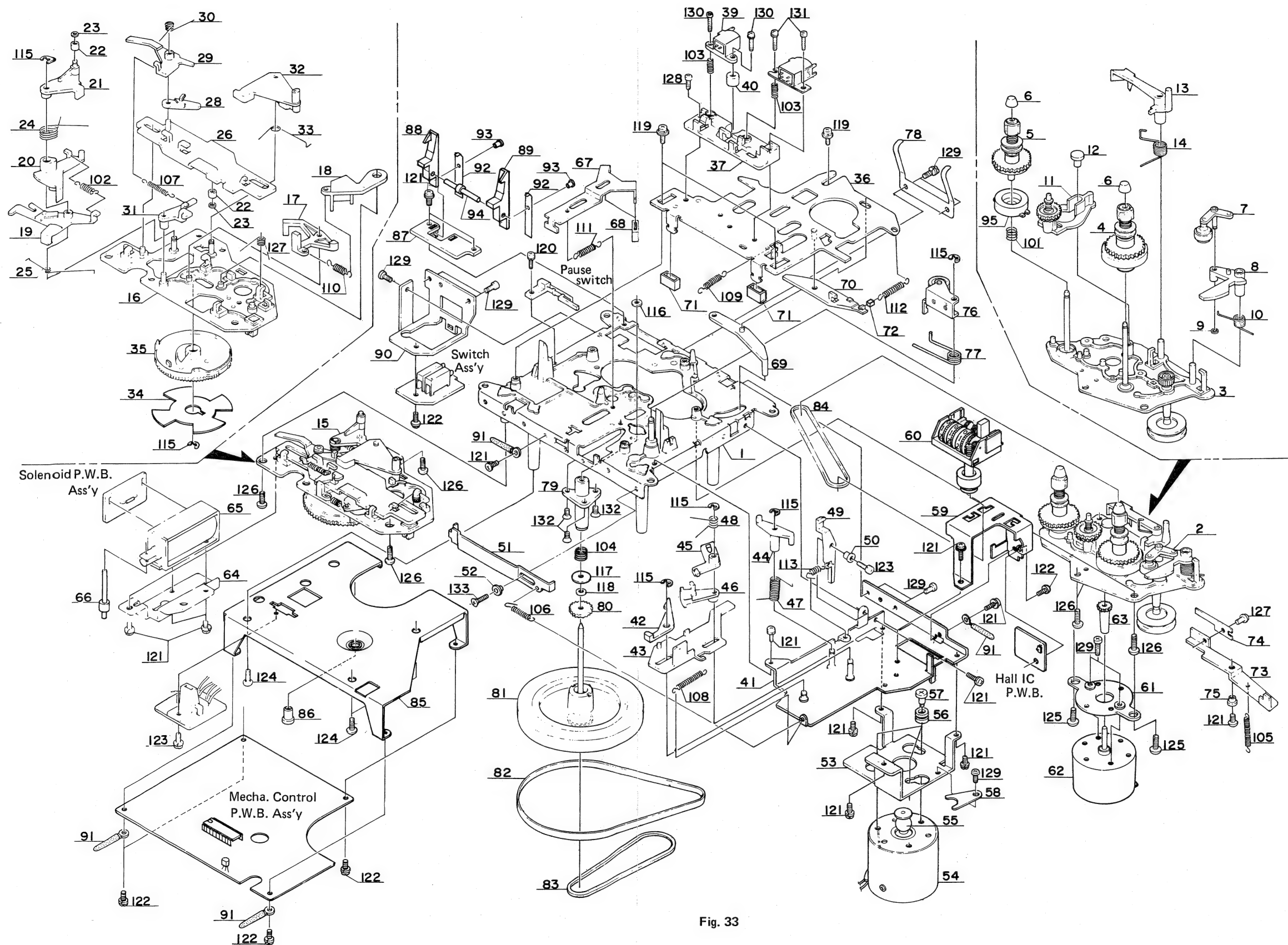


Fig. 33

Mechanical Component Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL1162-00F	Chassis Base Ass'y		1
2	VKL3214-00F	Reel Disk Ass'y Unit		1
3	VKL3215-00B	Reel Disk Bracket Ass'y		1
4	VKR4246-00A	Reel Disk Ass'y	Take-up	1
5	VKR4247-00A	Reel Disk Ass'y	Supply	1
6	VKR4160-001	Reel Stopper		2
7	VKS4240-00A	Idler Arm Ass'y		1
8	VKS4170-001	Take-up Lever		1
9	TEP357421-05	Special Washer	Take-up Arm	1
10	VKW4181-001	Take-up Lever Spring		1
11	VKS4203-00B	FF. Rew. Gear Ass'y		1
12	VKS4174-001	Lock Pin		1
13	VKS4175-001	Neutral Arm		1
14	VKW4182-001	Neutral Arm Spring		1
15	VKL3217-00D	Drive Gear Ass'y Unit		1
16	VKL3218-00B	Gear Holder Ass'y		1
17	VKS4176-001	Stop Arm		1
18	VKS4177-001	Kick Arm		1
19	VKS4178-001	Pause Arm (3)		1
20	VKS4179-001	" (2)		1
21	VKS4180-00A	Pause Arm (1) Ass'y		1
22	VKH3000-031	Collar		2
23	VKZ4004-001	Special Washer		2
24	VKW4183-001	Pause Arm Spring	Pause Arm (1), (2)	1
25	VKW4184-001	"	Pause (3)	1
26	VKS4182-00B	Slide Bar Ass'y		1
27	VKW4185-001	Slide Bar Spring		1
28	VKS4184-001	Play Arm (2)		1
29	VKS4185-001	" (3)		1
30	VKW4186-001	Play Arm Spring		1
31	VKS4186-001	Brake Arm		1
32	VKS4187-001	Play Arm (1)		1
33	VKW4187-001	Play Arm (1) Spring		1
34	VKZ4134-002	Control Plate		1
35	VKS3114-002	Drive Gear		1
36	VKL3220-00C	Slide Bar Ass'y		1
37	VKS2102-001	Head Mount Base		1
38	VGH0421-006	R/P Head	VND4012-002 = Head Plate	1
39	ZMM090414-0A	E. Head	THC037417-02 = Head Plate	1
40	VKH4215-001	Head Collar		1
41	VKL3264-00B	Side Bracket Ass'y		1
42	VKS4190-001	Eject Arm		1
43	VKS4334-001	Eject Slide Bar		1
44	VKS4191-001	Safety Arm (1)		1
45	VKS4234-001	Safety Arm (2)		1
46	VKS4235-001	Safety Arm (3)		1
47	VKW4188-001	Safety Arm Spring		1
48	VKW4220-001	"		1
49	VKS4342-001	Lock Arm		1
50	VKH3001-039	Flange Collar		1
51	VKL4661-002	Stop Slide Bar		1
52	VKH4306-001	Collar		1
53	VKL4879-001	Motor Bracket		1
54	MHI-5E2LDPB	Motor	Capstan	1
55	VKS4188-004	Motor Pulley		1
56	VKZ4130-001	Cushion Rubber		3
57	VKZ4109-001	Motor Screw		3
58	TFB345469-01	Rubber Stopper		1
59	VKL5014-001	Counter Bracket		1
60	VKC5145-002S	Tape Counter		1
61	VKL4657-003	Reel Motor Bracket		1
62	BFT6B01	Reel Motor		1
63	VKS4193-002	Motor Gear		1
64	VKL4658-002	Solenoid Bracket		1
65	VGP0401-005	D.C. Solenoid		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
66	VKH4324-001	Solenoid Pin		1
67	VKL4659-001	Brake Bar		1
68	VKZ4129-001	Brake Rubber		2
69	VKS4353-001	Take-off Lever		1
70	VKS4277-001	Slide Base Arm		1
71	T44341-001	Rubber Tire		2
72	TJN265559-04	Silencer		1
73	VKL4925-001	Kick Lever		1
74	VKY4204-002	Spring Plate		1
75	VKH3001-024	Flange Collar		1
76	VKP4106-00B	Pinch Roller Arm Ass'y		1
77	VKW4189-001	Pinch Roller Spring		1
78	VKY4171-001	Pack Spring		1
79	VKF4108-00A	Capstan Metal Ass'y		1
80	VKS4199-001	Flywheel Gear		1
81	VKF3114-00B	Flywheel Ass'y		1
82	VKB3001-012	Belt	Capstan	1
83	VKB3000-017H	"	Take-up	1
84	" -031H	"	Counter	1
85	VKL3305-001	Flywheel Holder		1
86	TEP357456-01	Thrust Bearing		1
87	VKS4271-001	Arm Holder		1
88	VKS4322-001	Rec. Safety Arm		1
89	VKS4323-001	Cassette Switch Arm		1
90	VKL4881-003	SW. Bracket		1
91	VKZ4001-007	Wire Holder		4
92	VKY4204-001	Safety Plate		2
93	VKS4324-001	Pin		2
94	VKH4291-001	Shaft		1
95	VKS4247-001	Back Tension Base		1
101	THIS DWG.	Comp. Spring	Back Tension	1
102	VKW3000-014	Tension Spring	Pause Arm (2), (3)	1
103	VKW3001-020	Comp. Spring	R/P, E. Head	2
104	VKW3001-044	"	Thrust	1
105	VKW3002-011	Tension Spring		1
106	" -020	"	Stop S. Bar	1
107	" -022	"	Play Arm (3), Brake Arm	1
108	" -038	"	Eject S. Bar	1
109	" -042	"	Slide Base	1
110	" -046	"	Kick Arm	1
111	" -054	"	Brake Bar	1
112	" -060	"	Slide B. Arm	1
113	" -066	"	Lock Arm	1
115	REE2500	E-Ring	Pause Arm (1) Ass'y x 1, Drive Gear x 1, Eject Slide Bar x 3, Pinch Roller Spring x 1	6
116	Q03093-522	Washer	Oil Cut	1
117	" -628	"	Thrust	1
118	" -827	"	"	1
119	DPSP2605Z	Screw	Slide Base	3
120	LPSP2004Z	Ass'y Screw	Pause SW.	1
121	LPSP2604Z	"	Motor Bracket, Counter Bracket x 5, Side Bracket x 2, Solenoid, Solenoid Bracket x 4, Flange Collar x 1, Wire Holder x 1	13
122	LPSP2605Z	"	Mecha. Con, Auto Stop, Rec. Safety	6
123	LPSP2606Z	"	Lock Arm x 1, Photo C. x 1	2
124	SBSB2608Z	Tapping Screw	Flywheel Holder	3
125	SPSA2608Z	"	Motor Bracket	2
126	SPSB2608Z	"	Reel Unit x 3, Gear Ass'y Unit x 3	6
127	SPSP2003Z	Screw	Spring Plate	1
128	SPSP2004N	"	H. Mount Base	1
129	SPSP2603Z	"	Rubber Stopper x 1, Side Bracket x 2, Reel Motor x 2, Pack Spring x 2, SW. Bracket x 3	10
130	SPSX2008N	"	E. Head	2
131	SPSX2010N	"	R/P Head	2
132	SSSP2605Z	"	Capstan Metal	3
133	SSSP2606Z	"	Stop Slide Bar	1

Tuner P.W. Board Parts

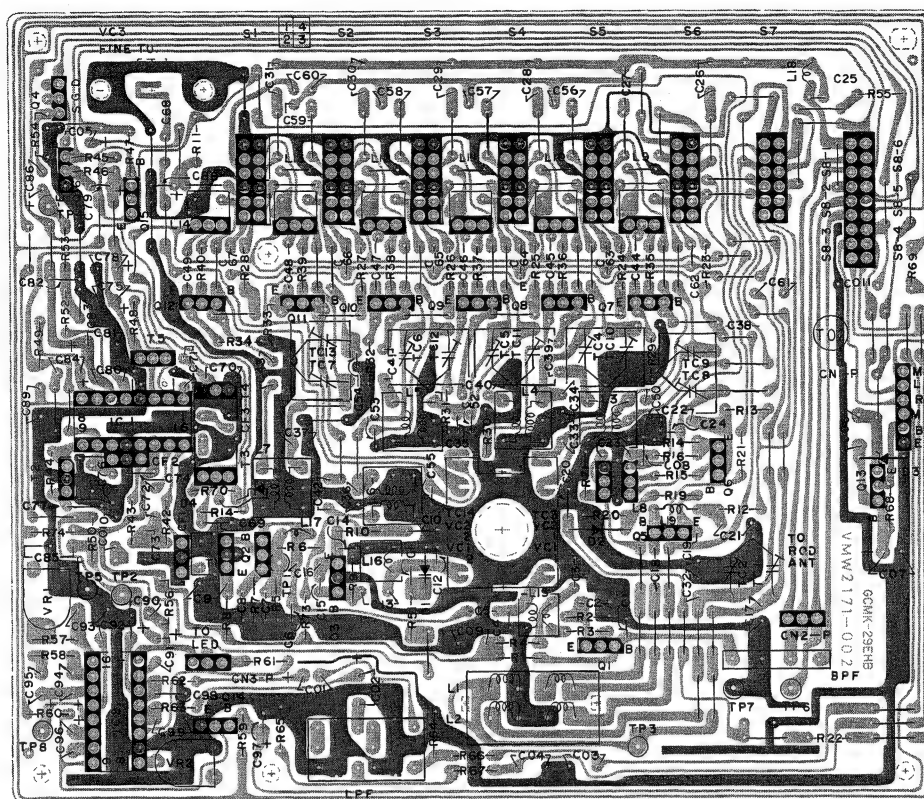


Fig. 34

Tuner P.W. Board Parts List

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
Q1, 2		VMW2171-002	P.W. Board	No supply as parts ass'y	1
Q3		2SC535(B)	Transistor		2
Q4		2SA838(C)	"		1
Q5-12		2SK246(GR,BL)	FET		1
		2SC929(D)	Transistor		8
Q13		2SD468(C)	"		1
Q14, 15, 16		2SC923(E,U)	"		3
IC1		HA12413	IC		1
IC2		AN7410N	"		1
D1		1S553T	Vari Cap		1
D2, 5		1K34A	Ge. Diode		2
D3		HZ6C1L	Zener Diode		1
D4, 6, 7		MA150	Si. Diode		3
BPF		VBP3M4E-001	B.P. Filter		1
CF1, 2		V03059-013	C. Filter		2
LPF		VQZ0011-001	L.P. Filter		1
VR1, 2		QVP8A0B-014	V. Resistor	10 kΩ	2
T1		VQT7F12-104	IFT		1
T2		VQT7F07-501	"		1
T3, 4, CF3		VQT7A31-104	"		1
		"	"		1
T5		VQT7A11-301	"		1
L1, 2		VQB014B-301	Bar Ant. Ass'y	MW, LW	1
L3		VQR1001-314S	ANT. Coil	SW1	1
L4		" -311	"	SW2	1
L5		" -312	"	SW3	1
L6		" -202	"	SW4	1
L7		" -315	"	SW5	1
L8		VQM7T03-301	OSC. Coil	MW	1
L9, 10		VQL7S02-301	"	LW, SW1	2
L11, 12		VQS7S02-302	"	SW2, SW3	2

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
L13		VQS7S02-303	OSC. Coil	SW4	1
L14		" -305	"	SW5	1
L15		VQF1B12-001	RF Coil	FM	1
L16		V03105-029	OSC. Coil	FM	1
L17		V03047-6	Coil	FM	1
L18		V03047-21	"	SW	1
L19, 20		VQP0003-471	Inductor		2
R1		QRD161J-334	C. Resistor	330 kΩ 1/6 W	1
R2		" -332	"	3.3 kΩ "	1
R3		" -680	"	68 Ω "	1
R4, 8		" -271	"	270 Ω "	2
R5, 43, 47, 64, 65		QRD141J-103S	"	10 kΩ 1/4 W	5
R6, 70		QRD161J-273	"	27 kΩ 1/6 W	2
R7, 14, 58, 75		" -102	"	1 kΩ "	4
R9, 48		" -474	"	470 kΩ "	2
R10, 36		" -561	"	560 Ω "	2
R11, 80		" -154	"	150 kΩ "	2
R12		QRD141J-223S	"	22 kΩ "	1
R13		QRD161J-564	"	560 kΩ "	1
R15, 19, 21, 35, 37, 38, 71, 73		" -101	"	100 Ω "	8
R16		" -470	"	47 Ω "	1
R17, 41, 61		" -331	"	330 Ω "	3
R20, 22, 29-34, 40, 66, 67, 68		" -152	"	1.5 kΩ "	12
R23-26, 28		" -684	"	680 kΩ "	5
R27		" -105	"	1 MΩ "	1
R39		" -471	"	470 Ω "	1
R42		" -221	"	220 Ω "	1
R44, 49		" -562	"	5.6 kΩ "	2
R45		" -472	"	4.7 kΩ "	1
R46		" -563	"	56 kΩ "	1
R50, 51		" -104	"	100 kΩ "	2
R52		QRD141J-222S	"	2.2 kΩ 1/4 W	1
R53, 62		QRD161J-272	"	2.7 kΩ 1/6 W	2
R54		" -473	"	47 kΩ "	1
R55		" -103	"	10 kΩ "	1
R56		" -100	"	10 Ω "	1
R57		" -183	"	18 kΩ "	1
R59		" -223	"	22 kΩ "	1
R60, 79		" -682	"	6.8 kΩ "	2
R63		QRD141J-272S	"	2.7 kΩ 1/4 W	1
R69		" -272S	"	2.7 kΩ "	1
R72		" -823S	"	82 kΩ 1/6 W	1
R74		QRD161J-330	"	33 Ω "	1
R76		QRD141J-562S	"	5.6 kΩ 1/4 W	1
R78		" -820S	"	82 Ω 1/6 W	1
TC1, 2		QAT2002-001	T. Capacitor		1
TC4, 10		" -001	"		1
TC5, 11		" -001	"		1
TC6, 12		" -001	"		1
TC7, 13		" -001	"		1
TC8, 9		" -001	"		1
VC1-1, 2, VC2-1, 2, 3, 14, 15, 16		QAP1224-521	V. Capacitor		6
C15, 36		QCS11HJ-180	C. Capacitor	18 pF 50 V	2
C2, 3, 8, 9, 09		QCF11HP-103	"	0.01 μF "	5
C4, 53		QCS11HJ-240	"	24 pF "	2
C5		" -6R0	"	6 pF "	1
C6		" -100	"	10 pF "	1
C7		" -471	"	470 pF "	1
C10		QCC11EM-103	"	0.01 μF 25 V	1
C11		QCT05CH-7R0	"	7 pF 50 V	1
C12, 58, 65		" -240	"	24 pF "	3
C13, 14		" -8R0	"	8 pF "	2

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
C16, 33, 026, 1		QCS11HJ-5R0	C. Capacitor	5 pF 50 V	4
C17		" -2R0	"	2 pF "	1
C18, 38-43, 71, 46, 48		QCY41HK-222	"	0.0022 μ F "	10
C19, 20, 69, 73, 74, 76, 82, 83, 92, 08, 015		QCC11EM-473	"	0.047 F 25 V	11
C21		QCS11HJ-271	"	270 pF 50 V	1
C22, 72, 77, 80, 06, 018, 027		QCC11EM-223	"	0.022 μ F 25 V	7
C23, 44, 03, 04		QCY41HK-472	"	0.0047 μ F 50 V	4
C24		QCT05YL-100	"	10 pF	1
C25		QCS11HJ-8R0	"	8 pF 50 V	1
C27-31		" -390	"	39 pF "	5
C32, 37		" -270	"	27 pF "	2
C34, 52		" -120	"	12 pF "	2
C35		" -300	"	30 pF "	1
C45, 47		QCY41HK-182	"	0.0018 μ F "	2
C49, 011		" -272	"	0.0027 μ F "	2
C50		QCT05CH-560	"	56 pF "	1
C51		QCT05WK-200	"	20 pF	1
C54		QCS11HJ-200	"	20 pF 50 V	1
C55		QCT05ZL-100	"	10 pF	1
C57		QCY41HK-471	"	470 pF 50 V	1
C59		" -821	"	820 pF "	1
C60		" -332	"	0.0033 μ F "	1
C61		QFS41HJ-361	P. Capacitor	360 pF "	1
C62		QFS41HJ-181	C. Capacitor	180 pF "	1
C63		" -122	"	0.0012 μ F "	1
C64		" -331	"	330 pF "	1
C66		" -561	"	560 pF "	1
C67		" -332	"	0.0033 μ F "	1
C68		QCS11HJ-470	"	47 pF "	1
C70		QCY41HK-152	"	0.0015 μ F "	1
C75		QET41AR-476	E. Capacitor	47 μ F 10 V	1
C78, 88, 91, 05		QET41ER-475	"	4.7 μ F 25 V	4
C79		QET41AR-336	"	33 μ F 10 V	1
C81, 07		" -477	"	470 μ F "	2
C84		QET41HR-105	"	1 μ F 50 V	1
C85		" -104N	E. Capacitor	0.1 μ F "	1
C86		QCC11EM-473	"	0.047 μ F "	2
C89		QCS11HJ-121	C. Capacitor	120 pF "	1
C90		QET41AR-107	E. Capacitor	100 μ F 10 V	1
C93		QFS41HJ-471	P. Capacitor	470 pF 50 V	1
C94		QEB41HM-224	E. Capacitor	0.22 μ F "	1
C95		" -474M	"	0.47 μ F "	1
C96, 01, 02		QET41HR-474	"	0.47 μ F "	3
C97		QET41CR-226	"	22 μ F 16 V	1
C98, 99		QFM41HK-103	M. Capacitor	0.01 μ F 50 V	2
C010, 012, 014		QCS11HJ-151	C. Capacitor	150 pF "	3
C013		QCC11EM-333	"	0.033 μ F 25 V	1
C020, 022		QCS11HJ-2R0	"	2 pF 50 V	2
C021		QCS11HJ-3R0	"	3 pF "	1
VC3		LPSP3006ZS	Screw		1
		51739-2	Lug		1
		QAT5001-201	M.U. Capacitor		1
S1-1...4, S2-1...4, S3-1...4, S4-1...4, S5-1...4, S6-1...4, S7-1...4, S8-1...6		VYH4776-001	Bracket		1
		LPSP3008ZS	Ass'y Screw		2
		QST3841-V01	Push Switch		1
CN1-P		VYSA1R6-009	Spacer		2
CN2-P		VKL3143-001	Board in Tab		4
		VYH4906-001	Shield		1
		QMV5005-006	Connector	PRE	1
CN3-P		" -003	"	ANT	1
D5, 603		VMW3156-001	P.W. Board	LED	1
		SLP141B	LED		2

Pre-Amp P.W. Board Parts



Fig. 35

Pre. Amp. P.W. Board Parts List

⚠ Parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
S501-1 ... 8		VMW1043-002	P.W. Board	No supply as parts ass'y	1
S502-1 ... 7		QSL8310-103V	Lever Switch	FUNCTION	1
S503-1 ... 3		" -101	"	TAPE	1
S504		QSL4210-103	"	AUTO/MANU.	1
		QSL2310-102	"	ANRS	1
S505		QSS1301-001	Slide Switch	BEAT CUT	1
VR101, 201		QVP8A0B-054	V. Resistor	PB LEVEL 50 kΩ	2
VR102, 202		QVF0A2A-054M	"	REC VOL 50 kΩ	2
VR103, 203		QVP8A0B-014	"	REC LEVEL 10 kΩ	2
VR104, 204		" -025	"	BIAS 200 kΩ	2
VR105, 205		" -015	"	BIAS 10 kΩ	2
VR502		QVF0E2A-024M	"	MIC MIX 20 kΩ	1
J101, 201		QMS3501-016	Jack	MIC	2
J501		QMC9014-006	DIN Socket	DIN	1
		Q03095-206	Washer		1
L501		VYH3108-002	Shield Plate		1
L502		VYH4904-001	Spacer		1
L101, 201		VQH1009-020	OSC. Coil	BIAS	1
		VQP0001-102S	Inductor		1
		" -183S	"		2
L102, 202		" -562S	"		2
L103,203,104,204,105,205		VQP9001-001	"		6
IC501		M51123P	IC		1
IC101, 201		AN7363	"		2
Q101, 201, 102, 202		2SC1845(E,U)	Transistor		4
Q104, 204		2SC1845(F)	"	or 2SC1843(F)	2
Q105,205,111,211,509,114,214		2SC945L(Q,P)	"		7
Q106-108,206-208,113,213,115,215,502,503,505-507,510		2SC945(Q,P)	"		16
Q109,209,110,210,508,103,203		2SC2001(L,K)	"		7
Q501, 504		2SA992(E,F)	"		2
D101,201,102,202,501-512		1S2076	Si. Diode		16
R101, 201, 538		QRD143J-332S	C. Resistor	3.3 kΩ 1/4 W	3
R102, 202, 514		" -272S	"	2.7 kΩ "	3
R103, 203		" -391S	"	390 Ω "	2
R227,507,211,127,141,241		" -152S	"	1.5 kΩ "	6
R172,272,544		QRD141J-682S	"	6.8 kΩ "	3
R105,205,144,244,142,242		" -392S	"	3.9 kΩ "	6
R106,206,125,225,128,228,134,234,140,240,167,267,506		" -472S	"	4.7 kΩ "	13
R107, 207, 160, 260, 176, 276, 504		" -223S	"	22 kΩ "	7
R108, 208, 519		" -471S	"	470 Ω "	3
R109, 209, 533		" -225S	"	2.2 MΩ "	3
R110, 210, 117, 217, 130, 230, 146, 221, 223, 505		" -153S	"	15 kΩ "	10
R111		QRD161J-152	"	1.5 kΩ 1/6 W	1
R212, 502, 503, 510, 532		QRD141J-332	"	3.3 kΩ 1/4 W	5
R113,213,114,214,136,236,174, 274		" -272	"	2.7 kΩ "	8
R118, 218,154, 254, 222		" -123	"	12 kΩ "	5
R119		QRD161J-333	"	33 kΩ 1/6 W	1
R219,137,237,143,243,518		QRD141J-333S	"	33 kΩ 1/4 W	6
R120, 220		" -560S	"	56 Ω "	2
R121		QRD161J-153	"	15 kΩ 1/6 W	1
R122		QRD143J-123S	"	12 kΩ 1/4 W	1
R123, 246		" -153S	"	15 kΩ "	2
R124, 224		QRD141J-224S	"	220 kΩ "	2
R126, 226		" -684S	"	680 kΩ "	2
R129, 229		QRD161J-472	"	4.7 kΩ 1/6 W	2
R133, 155, 255, 233		QRD141J-393S	"	39 kΩ 1/4 W	4
R132		" -473S	"	47 kΩ "	1

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
R232, 162, 262		QRD143J-473S	C. Resistor	47 kΩ 1/4 W	3
R135, 235		QRD141J-680S	"	68 Ω "	2
R138, 238, 511, 543		QRD143J-472S	"	4.7 kΩ "	4
R139, 239		QRD141J-222S	"	2.2 kΩ "	2
R147, 247, 169, 269		" -273S	"	27 kΩ "	4
R145, 245, 151, 251, 131, 231		" -183S	"	18 kΩ "	6
R148, 248, 520		" -562S	"	5.6 kΩ "	3
R149, 249		" -121S	"	120 Ω "	2
R150		QRD143J-822S	"	8.2 kΩ "	1
R250, 531, 104, 204		QRD141J-822S	"	8.2 kΩ "	4
R152, 252		" -3R3S	"	3.3 Ω "	2
R153, 253		" -821S	"	820 Ω "	2
R159, 259		" -100S	"	10 Ω "	2
R161, 261, 508		" -104S	"	100 kΩ "	3
R164, 264, 527		QRD143J-223S	"	22 kΩ "	3
R168, 268		" -683S	"	68 kΩ "	2
R170, 270, 163, 263, 166, 266, 542		" -562S	"	5.6 kΩ "	7
R171, 271		" -155S	"	1.5 MΩ "	2
R173, 273		" -102S	"	1 kΩ "	2
R175, 275		" -155S	"	1.5 MΩ "	2
R501, 528		QRD141J-101S	"	100 Ω "	2
R509, 530		" -105S	"	1 MΩ "	2
R512, 539		QRD143J-103S	"	10 kΩ "	2
R513		QRD141J-103S	"	10 kΩ "	1
R515		QRD143J-221S	"	220 Ω "	1
R516		" -684S	"	680 kΩ "	1
FR501	⚠	QRH141J-4R7	Fusible Resistor	4.7 Ω "	1
R521, 541		QRD143J-181S	C. Resistor	180 Ω "	2
R522	⚠	QRD149J-180S	Unflamable resistor	18 Ω "	1
R523	⚠	" -470S	"	47 Ω "	1
R524	⚠	" -100S	"	10 Ω "	1
R525		QRD141J-181S	C. Resistor	180 Ω "	1
R526		" -122S	"	1.2 kΩ "	1
R529		" -271S	"	270 Ω "	1
R536		" -561S	"	560 Ω "	1
R537		" -331S	"	330 Ω "	1
R540		QRD143J-1R0S	"	1 Ω "	1
FR502	⚠	QRH141J-2R2	Fusible Resistor	2.2 Ω "	1
R547		QRD143J-222S	C. Resistor	2.2 kΩ "	1
R548		" -151S	"	150 Ω "	1
C101, 201, 111, 211, 520, 524, 525		VMZ0015-001	Post Pin		7
		QET41HR-474	E. Capacitor	0.47 μF 50 V	7
C102, 202		QCS11HJ-451	C. Capacitor	450 pF "	2
C103, 203, 144, 244		QEB41HM-105M	E. Capacitor (Low Leak)	1 μF "	4
C104, 204, 522		QCS11HJ-101	C. Capacitor	100 pF "	3
C106, 206, 107, 207, 117, 217, 130, 230, 131, 231, 136, 236		QET41HR-335	E. Capacitor	3.3 μF "	12
C108, 208, 112-116, 212-216, 118, 218, 120, 220, 158, 258, 159, 259, 509		" -105	"	1 μF "	32
C109, 209, 128, 228		QET41AR-336	"	33 μF 10 V	4
C110, 210		QFM41HJ-273	M. Capacitor	0.027 μF 50 V	2
C119, 219, 510, 515		" -103	"	0.01 μF "	4
C121, 221, 156		QCS41HJ-301	C. Capacitor	300 pF "	3
C122, 222, 129, 229		QFM41HJ-152	M. Capacitor	0.0015 μF "	4
C123, 223		" -683	"	0.068 μF "	2
C124, 224		" -272	"	0.0027 μF "	2

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
C125, 225		QEB41HM-104	E. Capacitor (Low Leak)	0.1 μ F 50 V	2
C126, 226		QEB41EM-475M	" "	4.7 μ F 25 V	2
C127, 227, 521, 531		QET41AR-107	E. Capacitor	100 μ F 10 V	4
C132, 232, 513, 528, 532, 535, 538		" -227	"	220 μ F "	7
C133, 233		QCS11HJ-681	C. Capacitor	680 pF 50 V	2
C134, 234		QFM41HJ-122	M. Capacitor	0.0012 μ F "	2
C135, 235		" -184	"	0.18 μ F "	2
C137, 237, 152, 252		QET41ER-475	E. Capacitor	4.7 μ F 25 V	4
C138, 238		QFM41HJ-153	M. Capacitor	0.015 μ F 50 V	2
C139, 239		" -102	"	0.001 μ F "	2
C140, 240, 146, 246		QCS11HJ-471	C. Capacitor	470 pF "	4
C141, 241		" -561	"	560 pF "	2
C142, 242		QFS32BJ-331	P.S. Capacitor	330 pF "	2
C143, 243		QFM41HJ-332	M. Capacitor	0.0033 μ F 50 V	2
C147, 247		QCS11HJ-221	C. Capacitor	220 pF "	2
C148, 248		QCC11EM-103	"	0.01 μ F "	2
C149, 249		QCS11HJ-331	"	330 pF "	2
C151, 251		" -501	"	500 pF "	2
C154, 254, 530		QET41CR-106	E. Capacitor	10 μ F 16 V	3
C157, 257		QFN41HJ-224	M. Capacitor	0.22 μ F 50 V	2
C501, 505, 507, 508, 537		QET41AR-476	E. Capacitor	47 μ F 10 V	5
C502		QET41CR-336	E. Capacitor	33 μ F 16 V	1
C503, 529		" -337	"	330 μ F "	2
C504, 514, 527		" -477	"	470 μ F "	3
C506		" -108	"	1000 μ F "	1
C511		QCS11HJ-151	C. Capacitor	150 pF 50 V	1
C516		QFP82AJ-683	P.P. Capacitor	0.068 μ F 100 V	1
C517		QET41ER-106	E. Capacitor	10 μ F 25 V	1
C518		QFP82AJ-123	P.P. Capacitor	0.012 μ F 100 V	1
C519		QCY41HK-222	C. Capacitor	0.0022 μ F 50 V	1
C523		QCS11HJ-680	"	68 pF "	1
C533		QCC11EM-473	"	0.047 μ F 25 V	1
C534		QCY41HK-182	E. Capacitor	0.0018 μ F 50 V	1
C539		QET41HR-475	"	4.7 μ F "	1
C540		QCY41HK-472	"	0.0047 μ F "	1

Main Amp P.W. Board Parts

→ Front

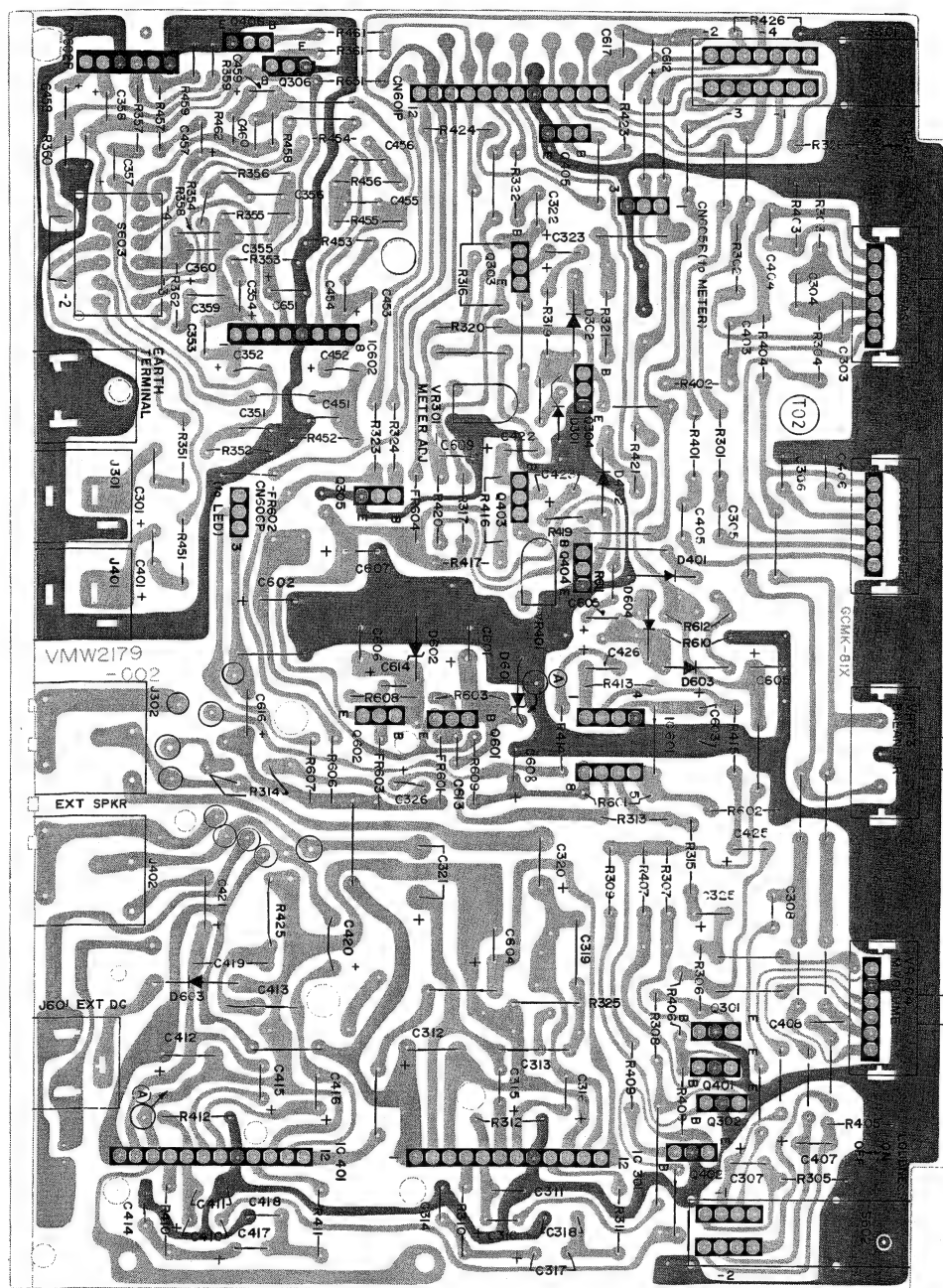
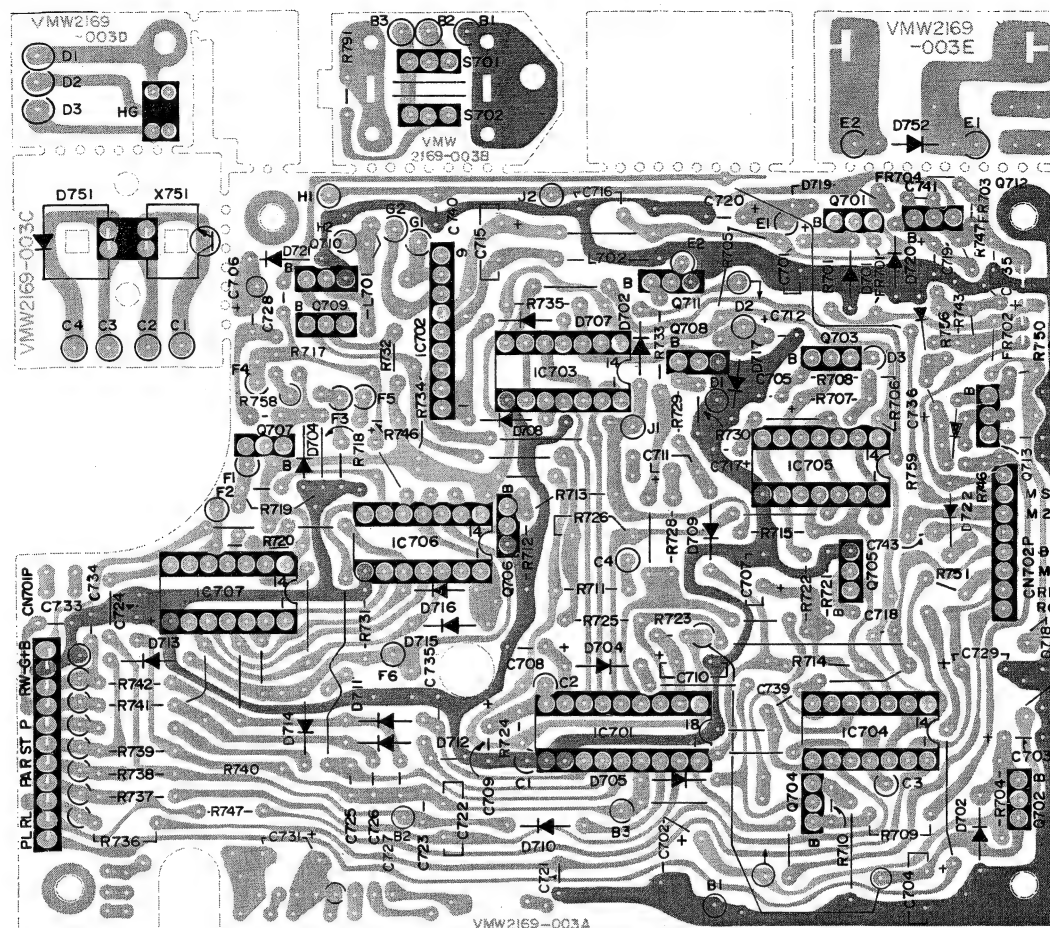


Fig. 36

Mechanical Control P.W.B. Parts



△ Parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

Mecha. Control P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
IC701	VMW2169-002A	P.W. Board		1
IC702	VUC0002-001	IC		1
IC703	BA6208A	"		1
IC704, 705, 706	M74LS00P	"		1
	M74LS05P	"		3
IC707	M74LS12P	"		1
X701	2SD325(E)HP	Transistor		1
X702, 712	2SD439(E)	"		2
X703, 704	2SD636(S)	"		2
X705, 706, 707, 708, 709, 713	2SD636(R,S)	"		6
X710, 711	2SC2673(P,Q,R)	"		2
D701, 723	HZ7C2	Zener Diode		2
D702, 718, 719	10E1	Si. Diode		3
D703	HZ6B	Zener Diode		1
D704-717, 722, 724	1S2076	Si. Diode		16
D721	HZ6C2	Zener Diode		1
D720	HZ12B1	"		1
R701, 704	QRD147J-102S	C. Resistor	1 kΩ ¼ W	2
R743	" -103S	"	10 kΩ "	1
R745	QRD143J-100S	"	10 Ω "	1
R747	" -391S	"	390 Ω "	1
R749	" -562S	"	5.6 kΩ "	1
R750	" -473S	"	47 kΩ "	1
R751	" -101S	"	100 Ω "	1
R754	" -102S	"	1 kΩ "	1

Ref. No.		Parts No.	Parts Name	Remarks	Q'ty
R758		QRD143J-822S	C. Resistor	8.2 k Ω ¼ W	1
R760		QRD141J-681S	"	680 Ω "	1
FR701, 704	△	QRH141J-4R7	Fusible Resistor	4.7 Ω "	2
FR702	△	" -100	"	10 Ω "	1
FR703	△	" -2R2	"	2.2 Ω "	1
C701, 704, 707, 712		QET41AR-227	E. Capacitor	220 μ F 10 V	4
C702, 731		QET41ER-108	"	1000 μ F 25 V	2
C703		QET41HR-105	"	1 μ F 50 V	1
C705		QET41AR-107	"	100 μ F 10 V	1
C706		QET41ER-476	"	47 μ F 25 V	1
C708		QET41AR-337	"	330 μ F 10 V	1
C709, 710		QEE41EM-105B	T.E. Capacitor	1 μ F 25 V	2
C711		QEB41EM-475	E. Capacitor (Low Leak)	4.7 μ F "	1
C713		QET41ER-336	E. Capacitor	33 μ F "	1
C714,718,721,722,723,725, 726,727,732,733,734,739, 741,742		QCF11EZ-223	C. Capacitor	0.022 μ F "	14
C715		QET41AR-477	"	470 μ F 10 V	1
C716, 728		QCF11EZ-473	"	0.047 μ F 25 V	2
C717, 724		QET41AR-476	E. Capacitor	47 μ F 10 V	2
C719		QET41CR-106	"	10 μ F 16 V	1
C720		QET41ER-477	"	470 μ F 25 V	1
C729		QET41CR-336	"	33 μ F 16 V	1
C735, 743		" -476	"	47 μ F "	2
C736		" -226	"	22 μ F "	1
C737, 738, 740		QCF11HP-103	C. Capacitor	0.01 μ F 50 V	3
C744		QCC11EM-104	"	0.1 μ F 25 V	1
CN701P		QMV5004-011	Connector		1
CN702P		" -008	"		1
L701		T41572-001	Inductor		1
L702		VQP0004-231	"		1
[Switch P.W. Board]					
S701, 702		VMW2169-002B	P.W. Board		1
R791		QSP0029-001	Push Switch		2
		QRD181J-680A	C. Resistor	68 Ω 1/8 W	1
[LED P.W. Board Ass'y]					
X751		VMW2169-002C	P.W. Board		1
D751		PN202S	Photo Transistor		1
		TLP108D	LED		1
		VKZ4135-001	Spacer		1
		VYH4450-001	Photo Shell		1
[H.G. P.W. Board Ass'y]					
H.G.		VMW2169-002D	P.W. Board		1
		VHE610G	Hall Element		1
[Solenoid P.W. Board]					
D752		VMW2169-002E	P.W. Board		1
S703		10E1	Si. Diode		1
		VSH1108-006	Switch Ass'y		1

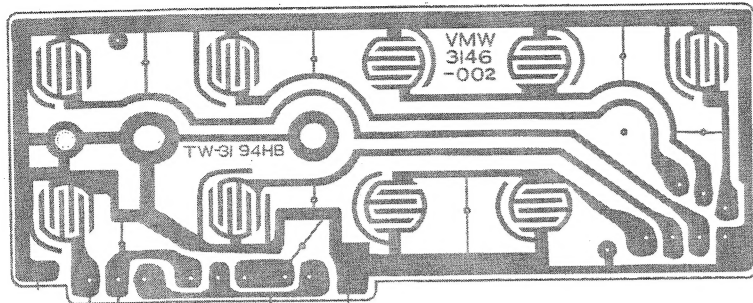
Main Amp. P.W. Board Parts List

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
S601-1 ... 4		VMW2179-002	P.W. Board	No supply as parts ass'y	1
S602-1 ... 2		QSL4210-103	Lever Switch	MONO - STEREO	1
S603-1 ... 4		QSL2210-101	"	LOUDNESS	1
VR601-1 ... 2, VR602-1 ... 2		QSS4201-072	Slide Switch		1
		QVD4A2A-015M	V. Resistor	BASS, TREBLE 50 kΩ	2
VR603		QVF0A2G-054M	"	BALANCE 50 kΩ	1
VR604-1 ... 2		QVN3A2B-A54M	"	MAIN VOL. 50 kΩ	1
VR301, 401		QVP8A0B-013	"	METER ADJ. 1 kΩ	2
J301		VMC0002-002	Pin Jack	PHONO IN	1
J401		" -001	"	"	1
J302, 402		QMC0289-003	Jack	EXT. SPKR	2
J601		QMA1221-006	DC Jack	EXT. DC IN	1
IC301, 401		VDE6028-B01	Volume Kit		1
IC601		AN7156N	IC		2
		μPC4557(C)	"		1
IC602		BA328	"		1
Q301, 401, 302, 402		2SC536(H)	Transistor	or 2SC2001(L,K)	4
Q303, 403, 304, 404		2SC536(F,G)	"		4
Q305, 405		2SC945(Q,P)	"		2
Q306, 406		2SC2001(L, K)	"		2
Q601		2SD439(E)	"		1
Q602		2SD325(E)HP	"		1
		VYH4905-001	Heat Sink		1
		VYSP1R5-024	Spacer		1
D301, 401, 604, 605		1S2076	Si. Diode		4
D302, 402		1K34A	Ge. Diode		2
D601		HZ11A2	Zener Diode		1
D602		HZ9C2	"		1
D603		DSA26B	Si. Diode		1
R301, 401, 307, 407, 309, 409, 360, 460		QRD141J-472S	C. Resistor	4.7 kΩ 1/4 W	8
R302, 402		" -822S	"	8.2 kΩ "	2
R303, 403, 361, 461		" -272S	"	2.7 kΩ "	4
R304, 404, 602		" -562S	"	5.6 kΩ "	3
R306, 406, 329, 429, 331, 431		" -152S	"	1.5 kΩ "	6
R308, 408, 454		" -102S	"	1 kΩ "	3
R310, 410, 311, 411		" -560S	"	56 Ω "	4
R312, 412, 362, 462, 352, 452		" -473S	"	47 kΩ "	6
R313, 413		" -105S	"	1 MΩ "	2
R314, 414		" -330S	"	33 Ω "	2
R315, 415		" -183S	"	18 kΩ "	2
R316, 416		" -684S	"	680 kΩ "	2
R317, 417, 322, 422,		" -332S	"	3.3 kΩ "	4
R319, 419		QRD143J-331S	"	330 Ω "	2
R320, 420, 324, 424		QRD141J-682S	"	680 Ω "	4
R321, 421		" -391S	"	390 Ω "	2
R323, 423		" -122S	"	1.2 kΩ "	2
R325, 425		QRD121J-2R2	"	2.2 Ω 1/2 W	2
R326, 426		QRD141J-122S	"	1.2 kΩ 1/4 W	2
R327, 427		" -104S	"	100 kΩ "	2
R328, 428		" -393S	"	39 kΩ "	2
R330, 430		" -155S	"	1.5 MΩ "	2
R332, 432		" -563S	"	56 kΩ "	2
R351, 451		" -182S	"	1.8 kΩ "	2
R353, 453		" -471S	"	470 Ω "	2
R355, 455, 363, 463		" -103S	"	10 kΩ "	4
R356, 456		" -124S	"	120 kΩ "	2
R357, 457, 606		" -683S	"	68 kΩ "	3
R358, 458		QRD143J-104S	"	100 kΩ "	2
R359, 459		" -563S	"	56 kΩ "	2
R354		" -102S	"	1 kΩ "	1
R425		QRD123J-2R2	"	2.2 Ω 1/2 W	1
R601		QRD141J-562S	"	5.6 kΩ 1/4 W	1
R603, 608, 651		" -681S	"	680 Ω "	3
R607, 305, 405		" -222S	"	2.2 kΩ "	3

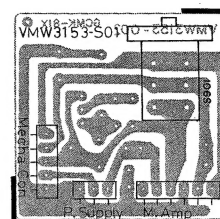
Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
R609, 651		QRD141J-101S	C. Resistor	10 Ω 1/4 W	2
R610		" -153S	"	15 k Ω "	1
R611		QRD143J-222S	"	2.2 k Ω "	1
R612		QRD141J-472S	"	4.7 k Ω "	1
CN601P		QMV5004-012	Connector	to PRE	1
CN602P		" -006	"	to H. PHONE	1
CN605P		QMV5005-003	"	to METER	1
CN606P		" -002	"	to DIN	1
C327, 427, 358, 458, 605		QET41HR-335	E. Capacitor	3.3 μ F 50 V	5
C303		QFM41HK-473	M. Capacitor	0.047 μ F "	1
C304, 404		QFM31HJ-104Z	"	0.1 μ F "	2
C305, 405		QCY41HK-222	C. Capacitor	0.0022 μ F "	2
C306, 406		QFM31HJ-223Z	M. Capacitor	0.022 μ F "	2
C307, 407		QEB41EM-224	E. Capacitor	0.22 μ F 25 V	2
C308, 408		QCY41HK-182	C. Capacitor	0.0018 μ F 50 V	2
C309, 409, 352, 452, 609		QET41HR-474	E. Capacitor	0.47 μ F "	3
C310, 410		QET41ER-475	"	4.7 μ F 25 V	2
C311, 411, 353		QCY41HK-102	C. Capacitor	0.001 μ F 50 V	3
C312, 412		QET41ER-228	E. capacitor	2200 μ F 25 V	2
C313, 413, 319, 419		QFN41HJ-224	M. Capacitor	0.22 μ F 50 V	4
C314, 414		QCC11EM-433	C. Capacitor	0.047 μ F 25 V	1
C315, 415, 316, 416, 354, 454		QET41AR-476	E. Capacitor	47 μ F 10 V	6
C317, 417, 603, 651		" -107	"	100 μ F "	4
C318, 418		QCC11EM-473	C. Capacitor	0.047 μ F 25 V	2
C320, 420, 321, 421		QET41CR-228	"	2200 μ F 16 V	4
C322, 422, 323, 423, 325, 301, 401, 425, 357, 457		QET41HR-105	"	1 μ F 50 V	10
C324, 424, 359, 459, 612		QET41CR-106	"	10 μ F 16 V	5
C326, 426		QET41ER-226	"	22 μ F "	2
C351, 451		QCS11HJ-201	C. Capacitor	200 pF 50 V	2
C355, 455		QFM41HJ-822	M. Capacitor	0.0082 μ F "	2
C356, 456		" -273	"	0.027 μ F "	2
C360, 460		QCS11HJ-101	C. Capacitor	100 pF "	2
C453		QCY41HK-102	"	0.001 μ F "	1
C601, 606, 608		QET41AR-477	E. Capacitor	470 μ F 10 V	3
C602, 607		" -108	"	1000 μ F "	2
C604, 616		QET41ER-227	"	220 μ F 25 V	2
C610		QET41AR-227	"	47 μ F "	1
C611		" -106	"	10 μ F "	1
C613, 614		QCF11HP-103	"	0.01 μ F 50 V	1
C617		QCY41HK-152	"	0.0015 μ F "	1

Other P.W. Board Parts

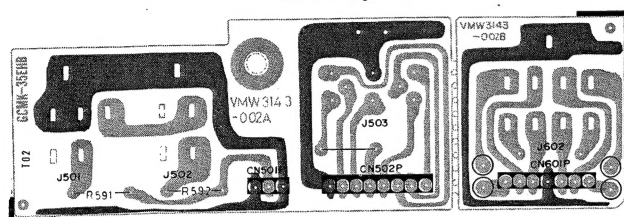
Mecha. Operation buttons



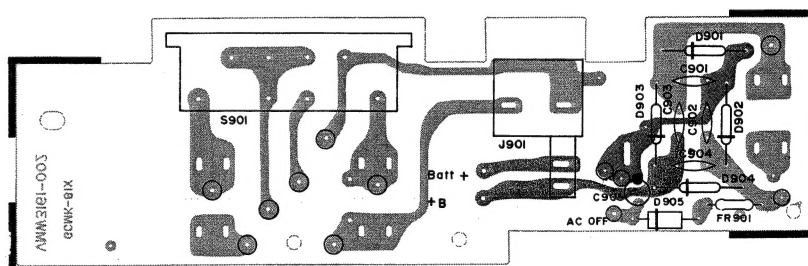
Power Switch



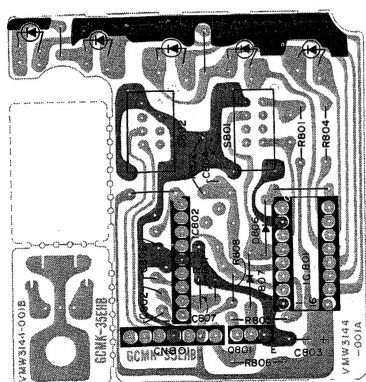
MIX Mic jacks



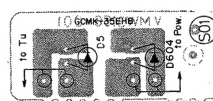
Power Supply



MMS



L.E.D



Mic wire connector

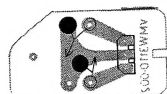


Fig. 37

△ Parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

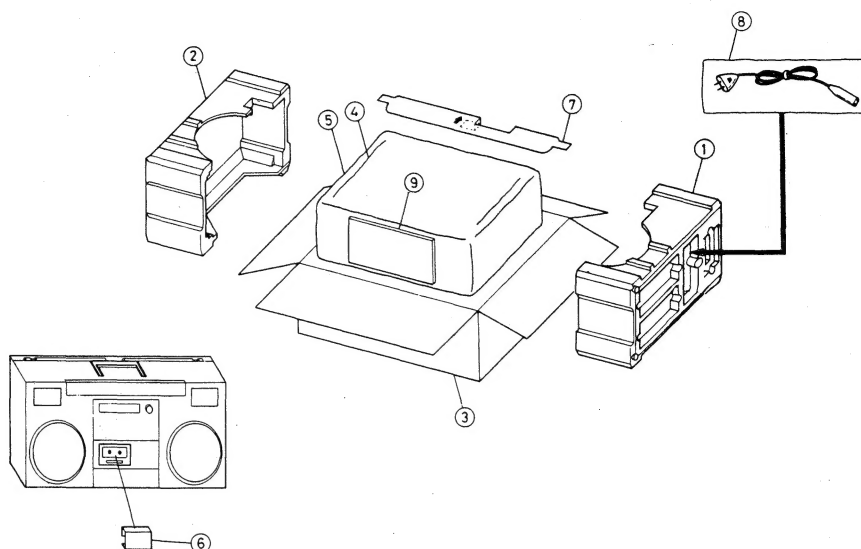
Other P.W. Board Parts List

Ref. No.	△	Parts No.	Parts Name	Remarks	Q'ty
[Power Switch] S901-1 ... 2 CN901P CN903P CN902P		VMW3153-002	P.W. Board	for Power SW	1
		QSP0210-016	Push Switch		1
		QMV5004-003	Connector		1
		" -005	"		1
		" -006	"		1
[M.M.S.] S801-1 ... 2 S802 IC802 IC801		VMW3144-001	P.W. Board		1
		QSL2309-004	Lever Switch		1
		" -003	"		1
		BA335	IC		1
		TC9138AP	"		1
Q801 D806, 807 R801 R802		2SC945(Q,P)	Transistor		1
		1S2076	Si. Diode		2
		QRD141J-102S	C. Resistor	1 kΩ 1/4 W	1
		" -563S	"	56 kΩ "	1
		" -151S	"	150 Ω "	1
R804 R805 R806 R807		" -332S	"	3.3 kΩ "	1
		" -222S	"	2.2 kΩ "	1
		" -474S	"	470 kΩ "	1
		" -473S	"	47 kΩ "	1
		C802	C. Capacitor	0.001 μF 50 V	1
C803 C804 C805		QET41CR-107	E. Capacitor	100 μF 16 V	1
		QCY41HK-103	C. Capacitor	0.01 μF 50 V	1
		QCF11EZ-103	"	0.01 μF 25 V	1
		C806	M. Capacitor	0.022 μF 50 V	1
		C807	"	0.082 μF "	1
C808 C809 C810		QET41CR-226	E. Capacitor	22 μF 16 V	1
		QMF41HK-103	M. Capacitor	0.01 μF 50 V	1
		QCF11EZ-223	C. Capacitor	0.022 μF 25 V	1
		V44611-002	F.B. Wire		2
		" -003	"		2
CN801P D801-805		QMV5004-006	Connector	To Mecha. Con. P.W.B.	1
		LN21RP.HL	LED		5
[MIX, MIC Jacks] J501 J502 J503		VMW3143-002A	P.W. Board		1
		QMS6305-001	Jack	MIX MIC.	1
		QMS6303-013	"	"	1
		QMC0888-010	DIN Socket		1
		SPSP3006MS	Screw		2
CN501P CN502P		QMV5004-003	Connector		1
		" -008	"		1
[Phones Jack] J602 CN601P		VMW3143-002B	P.W. Board		1
		QMS6312-012	Jack		1
		VYH4766-001	Jack Holder		1
		QMV5004-007	Connector		1
		VKZ4150-001	Special Nut		1
[LED] D752 D753		VMW3146-001	P.W. Board		1
		SLP144B	LED	Rec.	1
		SLP244B	"	Pause	1
[Power Supply] D901-904 FR901 D905 C901-904 C905	△	VMW3161-003	P.W. Board		1
	△	U08B-F	Si. Diode		4
	△	QRH141J-2R2	Fusible Resistor		1
	△	10E1	Si. Diode		1
		QCF11EZ-223	C. Capacitor	0.022 μF 25 V	4
S901 J901	△	QET41ER-335	E. Capacitor	3.3 μF "	1
	△	A44594-001	Fuse Clip		2
	△	QMF51A2-4R0	Fuse	RC-M90L/LD	1
	△	" -4R0BS	"	RC-M90LB	1
	△	QMC0263-002	AC Socket	RC-M90L	1
S902-1 ... 2 T901	△	" -002BS	"	RC-M90LB	1
	△	QSS2325-101	Slide Switch	RC-M90L	1
	△	" -101BS	"	RC-M90LB	1
	△	VTP66N2-15E	Power Transformer	RC-M90L/LD	1
	△	" -15EBS	"	RC-M90LB	1
VYH4960-00A VYSH1R5-001	△	VYH4960-00A	Shield Ass'y		1
	△	VYSH1R5-001	Spacer		1

Packing

Position of controls and switch knobs at renewed packing

Fine tuning knob : Center
 Band selector : MW
 Tuning : 600 kHz
 Power switch : OFF
 METER/MODE switch : MONO
 BASS control : Center
 TREBLE control : Center
 BALANCE control : Center
 VOLUME control : Center
 LOUDNESS switch : OFF
 FUNCTION switch : TAPE
 NR SYSTEM switch : OFF
 REC switch : MANU
 REC level controls : Center
 MIXING MIC LEVEL control : Center
 TIMER STANDBY switch : PLAY
 MULTI MUSIC SCANNER switch : ON
 BEAT CUT switch : "1" Normal
 PHONO/LINE IN selector switch : LINE IN



Packing Material Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1-3	VDP5072-004A	Carton Ass'y	RC-M90LB	1
	" -005A	"	RC-M90L	1
	" -006A	"	RC-M90LD	1
1	VPH1226-001	Cushion (L)		1
2	VPH1227-001	" (R)		1
3	VPD5072-J04	Carton	RC-M90LB	1
	" -J05	"	RC-M90L	1
	" -J07	"	RC-M90LD	1
4	VHPJ109-039	White Paper		1
5	QPGA085-06505	Poly Bag	for Unit	1
6	VPH4106-001	Door Protector		1
7	VPK4136-004	Spacer		1
8	QPGA012-01505	Poly Bag	for Power Cord	1
9	QPGB024-03404	"	for Instruction	1

Label


Parts No.	Parts Name	Remarks	Q'ty
53866-2	Label		1
31465-18	Mark	RC-M90LB	1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
VGP12M2-J02	Cassette Tape		1
QZL1002-003	Warning Label	RC-M90LB	1
QMP3950-183	Power Cord	RC-M90L	1
QMP9017-009BS	"	RC-M90LB	1
QPGA012-01505	Poly Bag	for Power Cord	1
VYA4001-00A	Head Cleaning Stick		1
BT20013C	Guaranty Certificate	RC-M90LB	1
VNC6305-001	Troubleshooting		1
*VNM0849-301	Instruction Book		1
*VNF0849-001	Feature Sticker		1
QPGB024-03404	Poly Bag		1

JVC

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